

Name: _____

**Vogtle 2021 (ILT23)
NRC RO
Student Test**

Start Time: _____

Stop Time: _____

1. 001K1.12 001

Initial condition:

- Unit 1 is at 100% reactor power.

Current conditions:

- Control rod H8 Rod Bottom LED is lit.
- Control rod H8 General Warning LED is flashing.
- Data 'A' and Data 'B' Failure LEDs are flashing.

Which one of the following completes the following statement?

Based on the current conditions, the crew is expected to receive __(1)__,

and

automatic rod motion and manual rod motion __(2)__ inhibited.

A. ALB10-B06 ROD CONTROL URGENT FAILURE

are

B. ALB10-B06 ROD CONTROL URGENT FAILURE

are NOT

C. ALB10-D05 RPI URGENT ALARM

are

D. ALB10-D05 RPI URGENT ALARM

are NOT

2. 002K3.03 001

At time 0900:

- Unit 1 is at 100% reactor power.
- Containment pressure is 0.2 psig.

At time 0905:

- Reactor trips due to a small RCS LOCA.
- Containment pressure is rising 0.2 psig every 5 minutes at a stable rate.

Which one of the following completes the following statement?

At time 1005, Tech Spec LCO 3.6.4, "Containment Pressure," __ (1) __ be met,

and

the Tech Spec LCO 3.6.5, "Containment Air Temperature," limit is based on the __ (2) __ containment temperature.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | will | average |
| B. | will | highest |
| C. | will NOT | average |
| D. | will NOT | highest |

3. 003K1.10 001

Initial conditions:

- Unit 1 is completing an outage.
- RCS temperature is 215 F.
- RCS pressure is 250 psig.
- VCT pressure is 28 psig.
- RCP #1 is to be started following maintenance per 13003-1, "Reactor Coolant Pump Operation."
- SG #1 secondary temperature meets the requirements for starting RCP #1.

Current conditions:

- RCP #1 Oil Lift pump is started.
- RCP #1 Oil Lift pressure is 575 psig and stable.

Which one of the following completes the following statements?

Consider each statement separately.

Based on the given conditions and per 13003-1, the **minimum** required No.1 seal differential pressure for starting RCP #1 __ (1) __ met.

Based on the given conditions, if the RCP #1, non-1E breaker handswitch is taken to START, the breaker __ (2) __ close.

- | | __(1)__ | __(2)__ |
|----|---------|----------|
| A. | is | will |
| B. | is | will NOT |
| C. | is NOT | will |
| D. | is NOT | will NOT |

4. 004K2.02 001

Initial conditions:

- Unit 2 is at 20% reactor power.
- Main Generator is tied to the grid.
- NCP is in service.

Current conditions:

- Main Generator trips.
- RAT '2A' de-energizes due to a fault.
- DG2A starts and re-energizes its associated bus.
- All load sequencing is complete.

Which one of the following completes the following statement?

Based on the given conditions and with no operator action, the NCP __ (1) __ be **running**,

and

CCP 'A' __ (2) __ be **running**.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | will | will |
| B. | will | will NOT |
| C. | will NOT | will |
| D. | will NOT | will NOT |

5. 005AA1.05 001

Initial conditions:

- Unit 1 is at 95% reactor power with a power ascension in progress.
- CBD is at 200 steps.

Current conditions:

- ALB10-D06 ROD DEV is received.
- CBD rod M12 DRPI indicates 109 steps.
- 18003-C, "Rod Control System Malfunction," is entered.
- Reactor power has been lowered per 18003-C guidance.

Which one of the following completes the following statement?

Per 18003-C, control rod M12 is considered __ (1) __,

and

during recovery of control rod M-12, the OATC will observe its DRPI moving at __ (2) __ steps/minute.

- | | __ (1) __ | __ (2) __ |
|----|------------|-----------|
| A. | dropped | 48 |
| B. | dropped | 64 |
| C. | misaligned | 48 |
| D. | misaligned | 64 |

6. 005K3.02 001

Initial conditions:

- Unit 1 is in Mode 4.
- RCP #4 is running.
- RHR Train 'B' is in service for temperature control.
- RHR Train 'A' is in standby.

Current conditions:

- RHR pump 'B' trips.
- 18019-C, "Loss of Residual Heat Removal," is in progress.
- RCS temperature is 255 F and slowly rising.

Which one of the following completes the following statement?

Based on the given conditions, Tech Spec LCO 3.4.6, "RCS Loops - Mode 4,"
__(1)__ met,

and

per 18019-C, RCP #4 is __(2)__.

- | | __(1)__ | __(2)__ |
|----|---------|---------------------------|
| A. | is | required to be stopped |
| B. | is | allowed to remain running |
| C. | is NOT | required to be stopped |
| D. | is NOT | allowed to remain running |

7. 006K4.13 001

Initial conditions:

- Unit 2 reactor trip and SI occur due to a LOCA.
- Reactor Trip Breaker 'B' will NOT open.

Current conditions:

- 19012-2, "Post-LOCA Cooldown and Depressurization," is in progress.
- Crew is preparing to reset CIA.

Which one of the following completes the following statements?

Consider each statement separately.

Based on the given conditions, the CIA signal __ (1) __ be reset.

To verify if CIA is reset, indication __ (2) __ available on the IPC.

- | | __(1)__ | __(2)__ |
|----|---------|---------|
| A. | can | is |
| B. | can | is NOT |
| C. | can NOT | is |
| D. | can NOT | is NOT |

8. 007EA1.05 001

Initial conditions:

- Unit 1 is at 2E -3% reactor power.
- Intermediate Range N35 is operating erratically.
- 18002-C, "Nuclear Instrumentation System Malfuction," is entered.
- Intermediate Range N35 Level Trip switch is placed in the BYPASS position.

Current conditions:

- Intermediate Range N35 **control** power breaker trips open.
- No operator action has been taken.

Which one of the following completes the following statement?

Based on the current conditions, the Intermediate Range N35 Reactor Trip bistables ___(1)___ in a tripped condition,

and

the Reactor Trip Breakers ___(2)___ **open**.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | are | are |
| B. | are | are NOT |
| C. | are NOT | are |
| D. | are NOT | are NOT |

9. 007K5.07 001

Given the following:

- Unit 1 is at 100% reactor power.
- Pressurizer Safety Valve 'A', fails 15% open.
- OATC is monitoring Pressurizer Safety Valve 'A' tail pipe temperature.
- PRT pressure is 11 psig.

Which one of the following completes the following statement?

Based on the given conditions, Pressurizer Safety Valve 'A' tail pipe temperature will indicate approximately (1) F,

and

with the Safety Valve remaining open, the tail pipe temperature indication (2) rise continuously until pressurizer steam space temperature is reached.

- | | <u> (1) </u> | <u> (2) </u> |
|----|----------------|----------------|
| A. | 197 | will |
| B. | 197 | will NOT |
| C. | 241 | will |
| D. | 241 | will NOT |

10. 008AA2.06 001

Initial conditions:

- Unit 2 is at 100% reactor power.
- 2PV-456, Pressurizer PORV, fails open.

Current condition:

- ALB12-D03 PRZR PRESS LO PORV BLOCK is received.

Which one of the following completes the following statement?

Based on the given conditions, 2PV-456 ___(1)___ received a closure signal from SSPS,
and

Tech Spec LCO 3.4.1, "RCS Pressure, Temperature, and Flow Departure from Nucleate Boiling (DNB) Limits," ___(2)___ met.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | has | is |
| B. | has | is NOT |
| C. | has NOT | is |
| D. | has NOT | is NOT |

11. 008K1.14 001

Given the following:

- Unit 1 is at 100% reactor power.
- 1RE-1950, ACCW Process Liquid, radiation level trends up and then stabilizes.
- ACCW Surge Tank level rises slightly and then stabilizes.

Which one of the following completes the following statement?

Based on the given conditions, a __ (1) __ Heat Exchanger tube leak has occurred,

and

ACCW Surge Tank level stabilized when high __ (2) __ caused an automatic isolation of the leak flow path.

- | | __ (1) __ | __ (2) __ |
|----|-----------------|-------------|
| A. | Letdown | flow |
| B. | Letdown | temperature |
| C. | Thermal Barrier | flow |
| D. | Thermal Barrier | temperature |

12. 008K6.09 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- ACCW pump #2 is in service.
- ACCW pump #1 is in standby.

Current conditions:

- NSCW Train 'B' is shut down due to a piping break.
- No other operator action has been taken.

Which one of the following completes the following statement?

Based on the given conditions, cooling ___(1)___ being provided to the ACCW pump #2 motor,

and

cooling ___(2)___ being provided to the ACCW system loads.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | is | is |
| B. | is | is NOT |
| C. | is NOT | is |
| D. | is NOT | is NOT |

13. 009EG2.2.22 001

Initial conditions:

- Unit 1 is at 100% reactor power with an RCS leak.
- 18004-C, "Reactor Coolant System Leakage," is in progress.
- OATC has stabilized pressurizer level.
- Total charging flow rate is 94 gpm.
- Letdown flow rate is 75 gpm.
- Total RCP seal leak-off flow rate is 12 gpm.
- RCP seal injection flow rate is 9 gpm to each RCP.

Current conditions:

- RCS leak rate has risen.
- Letdown is isolated.
- Total charging flow rate is 143 gpm.
- Pressurizer level is stable.
- VCT level is 30% with an automatic makeup in progress.

Which one of the following completes the following statements?

Based on the **initial** conditions, Tech Spec LCO 3.4.13, "RCS Operational Leakage," ___(1)___ met.

Based on the **current** conditions and per 18004-C, Charging Pump suction ___(2)___ required to be aligned to the RWST.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | is | is |
| B. | is | is NOT |
| C. | is NOT | is |
| D. | is NOT | is NOT |

14. 010A1.09 001

Given the following:

- Unit 1 is at 100% reactor power.
- 1PV-455, Pressurizer PORV, begins leaking by its seat.
- 1TI-449, PORV 455 Relief Temperature, on the QMCB is OOS.

Which one of the following completes the following statement?

Based on the given conditions, the indicated tail pipe temperature for **1PV-456**, Pressurizer PORV, (1) expected to rise,

and

indication of 1PV-455 tail pipe temperature (2) available on the QPCP.

- | | <u> (1) </u> | <u> (2) </u> |
|----|----------------|----------------|
| A. | is | is |
| B. | is | is NOT |
| C. | is NOT | is |
| D. | is NOT | is NOT |

15. 011EK1.03 001

Initial conditions:

- Unit 2 reactor trip and SI occur due to a LOCA.
- Containment Spray (CS) is operating.
- 19010-2, "Loss of Reactor or Secondary Coolant," is in progress.
- ALB06-F04 RWST LO-LO LEVEL is lit.
- ALB06-E05 RWST EMPTY LEVEL is lit.

Current conditions:

- CS is in the recirculation mode.
- Crew is evaluating when to stop CS pumps.
- Containment pressure is 16 psig.
- 2RE-002 and 2RE-003, Containment Area, are in **high** alarm.

Which one of the following completes the following statement?

Based on the **initial** conditions, swapping the CS pump suction to the Containment Sump is first required when ALB06-__(1)__ is received,

and

based on the **current** conditions and per 19010-2, the CS pumps are required to operate in the recirculation mode for a **minimum** of __(2)__ hours.

- | | __(1)__ | __(2)__ |
|----|---------|---------|
| A. | F04 | 1.5 |
| B. | F04 | 2.0 |
| C. | E05 | 1.5 |
| D. | E05 | 2.0 |

16. 012A2.01 001

Given the following:

- Unit 1 is at 100% reactor power.
- PB456A, PRZR HI PRESS, bistable fails.
- ALB11-C03 PRZR HI PRESS CHANNEL ALERT is received.
- 18001-C, "Primary Systems Instrumentation Malfunction," is entered.

Which one of the following completes the following statement?

The coincidence required in order for a Pressurizer High Pressure Trip to occur is ___(1)___

and

per 18001-C, the affected Pressurizer Pressure channel bistables are required to be ___(2)___ within 72 hours.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | 2 of 3 | tripped |
| B. | 2 of 3 | bypassed |
| C. | 2 of 4 | tripped |
| D. | 2 of 4 | bypassed |

17. 013A3.11 001

Initial condition:

- Unit 1 reactor trips from 30% reactor power.

Current conditions:

- RCS Tavg temperatures lower to the following:

<u>Loop #1</u>	<u>Loop #2</u>	<u>Loop #3</u>	<u>Loop #4</u>
563 F	566 F	564 F	563 F

- SG NR levels lower to the following:

<u>SG #1</u>	<u>SG #2</u>	<u>SG #3</u>	<u>SG #4</u>
41%	37%	40%	39%

Which one of the following completes the following statement?

Based on the current conditions, an automatic FWI __ (1) __ occurred,

and

the TDAFW pump __ (2) __ automatically started.

- | | | |
|----|-----------|-----------|
| | __ (1) __ | __ (2) __ |
| A. | has | has |
| B. | has | has NOT |
| C. | has NOT | has |
| D. | has NOT | has NOT |

18. 016K2.03 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- Steam Dumps are in the Tavg Mode.

Current condition:

- 1AY1A de-energizes due to a fault.

Which one of the following completes the following statement?

Based on the current conditions, 1UI-500, Steam Dump Demand, __ (1) __ indicate **higher** than before the fault,

and

the Steam Pressure Mode of operation __ (2) __ be affected by the fault.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | will | will |
| B. | will | will NOT |
| C. | will NOT | will |
| D. | will NOT | will NOT |

19. 022A4.01 001

Given the following:

- Unit 1 at 100% reactor power.
- Containment temperature is slowly rising due to high outdoor temperature.
- UO is starting additional Containment Cooling Unit Fans #7 and #8 per 13120-1, "Containment Building Cooling System."

Which one of the following completes the following statement?

Per 13120-1, the UO __ (1) __ required to start the additional Containment Cooling Fans one at a time,

and

after starting, the Group 4 MLB indicating lights for Cooling Unit Fans #7 and #8 __ (2) __ be **lit**.

- | | __(1)__ | __(2)__ |
|----|---------|----------|
| A. | is | will |
| B. | is | will NOT |
| C. | is NOT | will |
| D. | is NOT | will NOT |

20. 022AK2.10 001

Given the following:

- Unit 1 is at 100% reactor power.
- The following alarms are received:
 - ALB07-A05 REGEN HX LTDN HI TEMP
 - ALB07-B06 CHARGING LINE HI/LO FLOW
 - ALB07-D03 LTDN HX OUT HI TEMP
 - ALB08-F06 RCP SEAL WATER INJ LO FLOW
- 18007-C, "Chemical and Volume Control System Malfunction," is entered.

Which one of the following completes the following statement?

Based on the given conditions, __ (1) __ has failed **closed**,

and

when responding to the event, 18007-C __ (2) __ locally bypassing the failed valve.

- | | __ (1) __ | __ (2) __ |
|----|--------------------------------|----------------|
| A. | 1HV-182, Seal Flow Control | allows |
| B. | 1HV-182, Seal Flow Control | does NOT allow |
| C. | 1FV-121, Charging Flow Control | allows |
| D. | 1FV-121, Charging Flow Control | does NOT allow |

21. 022K4.04 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- CRDM Cooling Fans #1 and #2 are in service.

Current condition:

- CRDM Cooling Fan #1 shaft shears.

Which one of the following completes the following statement?

To diagnose the failure, a CRDM Cooling Fan low flow alarm ___(1)___ available on the Unit 1 QHVC,

and

individual CRDM Cooling Fan running amp indication ___(2)___ available on the Unit 1 QHVC.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | is | is |
| B. | is | is NOT |
| C. | is NOT | is |
| D. | is NOT | is NOT |

22. 026AK3.02 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- CCW pumps #1, #2, #4, and #5 are running.

Current conditions:

- Reactor trip and SI occur.
- 19000-1, "Reactor Trip or Safety Injection," is entered.
- Three minutes later, RAT '1A' de-energizes.
- DG1A starts and re-energizes its associated bus.

Which one of the following completes the following statement?

The **load shed** on the affected 4160 VAC bus was initiated by __ (1) __,

and

after all load sequencing is complete, a **total** of __ (2) __ CCW pumps will be running.

- | | __(1)__ | __(2)__ |
|----|---------------|---------|
| A. | SSPS | 4 |
| B. | SSPS | 5 |
| C. | the Sequencer | 4 |
| D. | the Sequencer | 5 |

23. 026G2.1.27 001

Given the following:

- Unit 1 reactor trip and SI occur due to a large break LOCA.
- Containment pressure is 26 psig.
- Containment Spray is operating.

Which one of the following completes the following statement?

One purpose of the Containment Spray system is to remove __(1)__ from the containment atmosphere,

and

control of containment fluid pH is accomplished by the use of __(2)__.

__(1)__

__(2)__

- | | | |
|----|----------------|--------------------------|
| A. | noble gases | batch chemical addition |
| B. | noble gases | chemical storage baskets |
| C. | gaseous iodine | batch chemical addition |
| D. | gaseous iodine | chemical storage baskets |

24. 027AA1.06 001

Initial conditions:

- Unit 2 is at 100% reactor power.
- Pressurizer pressure control is selected to CH 455/458.

Current conditions:

- One Pressurizer Pressure instrument fails.
- ALB11-A02 PRZR LO PRESS SI ALERT is received.
- ALB11-B02 PRZR LO PRESS ALERT is received.
- ALB11-D02 PRZR CONTROL LO PRESS AND HEATERS ON is received.
- 18001-C, "Primary Systems Instrumentation Malfunction," is entered.

Which one of the following completes the following statement?

Based on the given conditions, the failed Pressurizer Pressure instrument is __ (1) __,

and

with no operator action, 2PIC-455A, Pressurizer Pressure Master Controller, demand output will __ (2) __.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | 2PT-455 | rise |
| B. | 2PT-455 | lower |
| C. | 2PT-458 | rise |
| D. | 2PT-458 | lower |

25. 027K5.01 001

Given the following:

- Unit 1 reactor trip and SI occur due to a LOCA.
- 19253-1, "Response to Containment High Radiation," is entered.

Which one of the following completes the following statement?

Recirculating containment atmosphere through the Pre-Access Filter Units __ (1) __
reduce containment iodine levels,

and

based on the given conditions, the Pre-Access Filter Units __ (2) __.

- | | __ (1) __ | __ (2) __ |
|----|-----------|--------------------------|
| A. | will | required manual starting |
| B. | will | automatically started |
| C. | will NOT | required manual starting |
| D. | will NOT | automatically started |

26. 028AA2.03 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- Pressurizer level control is selected to CH 461/460.

Current conditions:

- 1LT-461, Pressurizer Level, fails **as-is**.
- Reactor power is being lowered to 30%.

Which one of the following completes the following statement?

As reactor power lowers and with no additional operator action, ALB11-C01 PRZR CONTROL HI LEVEL DEV AND HEATERS ON __ (1) __ be received,

and

ALB08-F06 RCP SEAL WATER INJ LO FLOW __ (2) __ be received.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | will | will |
| B. | will | will NOT |
| C. | will NOT | will |
| D. | will NOT | will NOT |

27. 028K4.02 001

Initial conditions:

- Unit 1 reactor trip and SI occur due to a LOCA.
- 19010-1, "Loss of Reactor or Secondary Coolant," is in progress.

Current condition:

- UO is placing the Containment Hydrogen Monitors in service per 13130-1, "Post-Accident Hydrogen Control."

Which one of the following completes the following statement?

To place the Containment Hydrogen Monitors in service per 13130-1, the SI signal ___(1)___ required to be reset,

and

when in service, containment hydrogen concentration indication ___(2)___ available on the QPCP.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | is | is |
| B. | is | is NOT |
| C. | is NOT | is |
| D. | is NOT | is NOT |

28. 029EA2.13 001

Initial conditions:

- Unit 1 experiences an ATWT at EOL.
- 19211-1, "Response to Nuclear Power Generation/ATWT," is in progress.
- Emergency boration can NOT be initiated.

Current conditions:

- Crew is at Step 21 to "Check reactor power."
- Reactor power is 7%.
- Intermediate Range SUR is 0 DPM.
- RCS temperature is 552 F and slowly rising.
- RCS pressure is 2285 psig and slowly rising.

Which one of the following completes the following statements?

Based on the given conditions and per 19211-1, the crew is required to ___(1)___ the RCS heatup.

Based on the current conditions, the requirements to exit 19211-1 and return to the procedure and step in effect ___(2)___ met.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | stop | are |
| B. | stop | are NOT |
| C. | allow | are |
| D. | allow | are NOT |

29. 029K6.10 001

Initial conditions:

- Unit 2 is at 100% reactor power.
- Containment Mini-Purge is in service for air quality prior to a planned containment entry.

Current condition:

- 2RE-2565, Containment Vent Effluent, fails off-scale **high**.

Which one of the following completes the following statement?

Based on the current conditions, the Piping Penetration Area Filter and Exhaust Units ___(1)___ automatically start,

and

the Mini-Purge Exhaust Fan will trip **directly** as a result of ___(2)___ signal.

- | | ___(1)___ | ___(2)___ |
|----|-----------|----------------|
| A. | will | the CVI |
| B. | will | a low air flow |
| C. | will NOT | the CVI |
| D. | will NOT | a low air flow |

30. 032AG2.4.02 001

Initial conditions:

- Unit 1 is performing a reactor startup per 12003-1, "Reactor Startup (Mode 3 to Mode 2)."
- Control Bank rods are being withdrawn.
- Source Range N31 and N32 each indicate 4.9E +2 cps.
- Intermediate Range N35 and N36 are NOT on scale.

Current condition:

- Source Range N32 fails off-scale **high**.

Which one of the following completes the following statement?

Based on the **initial** conditions, the Intermediate Range NIs (1) be indicating on scale,

and

based on the **current** conditions, entry into 19000-1, "Reactor Trip or Safety Injection," (2) required.

- | | <u> (1) </u> | <u> (2) </u> |
|----|----------------|----------------|
| A. | should | is |
| B. | should | is NOT |
| C. | should NOT | is |
| D. | should NOT | is NOT |

31. 033AK1.01 001

Initial conditions:

- Unit 2 is at 7% reactor power.
- OATC reports that Intermediate Range N35 and N36 indications are significantly different.

Current condition:

- I&C determines that the N35 detector power supply output is **high**.

Which one of the following completes the following statement?

Based on the current conditions, the N35 QMCB meter will be indicating ___(1)___ than expected,

and

per Tech Spec LCO 3.3.1, "Reactor Trip System (RTS) Instrumentation," Function 4, Intermediate Range Neutron Flux, a **minimum** of ___(2)___ Intermediate Range NI channel(s) is (are) required to be OPERABLE.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | higher | 1 |
| B. | higher | 2 |
| C. | lower | 1 |
| D. | lower | 2 |

32. 038EG2.4.50 001

Initial conditions:

- Unit 1 is at 12% reactor power following an outage.
- SG tube leak develops on SG #3.
- ALB05-B03 INTMD RADIATION ALARM is received.
- ALB05-C03 HIGH RADIATION ALARM is received.

Current conditions:

- Unit 1 reactor trip and SI occur due to a SG #3 tube rupture.
- 19030-1, "Steam Generator Tube Rupture," is in progress.
- Containment pressure is 1.4 psig.
- Crew is at the Step to "Check ruptured SG level."
- SG #3 NR level is 27%.

Which one of the following completes the following statement?

Based on the **initial** conditions, __ (1) __ will provide the earliest valid indication of the SG tube leak,

and

based on the **current** conditions, the UO __ (2) __ required to isolate all AFW flow to SG #3.

- | | __ (1) __ | __ (2) __ |
|----|--------------------------|-----------|
| A. | 1RE-810, SJAE Exhaust | is |
| B. | 1RE-810, SJAE Exhaust | is NOT |
| C. | 1RE-724, Main Steam Line | is |
| D. | 1RE-724, Main Steam Line | is NOT |

33. 039K1.08 001

Given the following:

- Unit 2 is at 85% reactor power with a power ascension in progress.

Which one of the following completes the following statement?

Based on the given conditions, the MFP turbines are operating on __ (1) __ Steam,
and

when in automatic, the MFP turbine speed demand is determined **directly** from
__ (2) __.

- | | __ (1) __ | __ (2) __ |
|----|------------|-----------------------|
| A. | Main | SG NR level error |
| B. | Main | feedwater flow demand |
| C. | Hot Reheat | SG NR level error |
| D. | Hot Reheat | feedwater flow demand |

34. 039K6.11 001

Initial conditions:

- Unit 1 is at 45% reactor power.
- Rod Control is in MANUAL.

Current conditions:

- Main Turbine trips.
- Reactor does NOT trip.
- Tavg - Tref deviation is 23 F.
- Steam Dump Banks #1, #2, #3, and #4 are fully open.
- No operator action has been taken.

Based on the given conditions, which one of the following is correct regarding the response of the Steam Dump System?

- A. Steam Dump System is operating as expected.
- B. ONLY Steam Dump Bank #1 should be open.
- C. ONLY Steam Dump Banks #1 and #2, should be open.
- D. Steam Dump Banks #1 and #2 should be open, Bank #3 throttled, and Bank #4 closed.

35. 045A1.07 001

Initial conditions:

- Unit 1 is completing an outage.
- Main Turbine rolling is in progress per 13800-1, "Main Turbine Operation."
- Stator Cooling Water pump #1 is operating.

Current conditions:

- ALB20-E01 TURBINE/GENERATOR TROUBLE is received.
- ALB20-F01 VIBRATION MONITOR TROUBLE is received.
- ALB19-A06 STATOR H2O FLOW LOW is received.

Which one of the following completes the following statement?

Based on the given conditions, to verify the status of individual bearing vibration levels, the operator will monitor the ___(1)___ screen on the Integrated Plant Computer (IPC),

and

if Stator Cooling Water flow rate continues to lower, Stator Cooling Water pump #2 ___(2)___ automatically start.

- | | ___(1)___ | ___(2)___ |
|----|-----------------------|-----------|
| A. | ATSI Summary | will |
| B. | ATSI Summary | will NOT |
| C. | Main Turbine Overview | will |
| D. | Main Turbine Overview | will NOT |

36. 050A4.01 001

Given the following:

- Unit 1 is at 100% reactor power.
- ALB50-B02 CR OSA SMOKE DETECTED is received due to a large brush fire.
- UO actuates Control Room Isolation (CRI).

Which one of the following completes the following statement?

When CRI is actuated, the Unit 1 ESF Chilled Water system automatically starts in no later than ___(1)___ seconds,

and

1HV-12114 and 1HV-12115, Control Room Outside Air Dampers, ___(2)___ automatically **close**.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | 60 | will |
| B. | 60 | will NOT |
| C. | 120 | will |
| D. | 120 | will NOT |

37. 051AK2.10 001

Initial conditions:

- Unit 2 is at 45% reactor power.
- Both Circ Water pumps are in service.

Current conditions:

- Circ Water pump #1 trips.
- ALB19-B04 TURB CNDSR LO VAC/HI RATE is received.
- 18040-2, "Partial Loss of Condenser Vacuum," is entered.
- Main Condenser vacuum is as follows:

24.42" Hg. vacuum (median value) on LP exhaust hood 'A'.
 25.11" Hg. vacuum (median value) on LP exhaust hood 'B'.
 25.41" Hg. vacuum (median value) on LP exhaust hood 'C'.

Which one of the following completes the following statement?

Based on the current conditions, the Main Turbine will automatically trip at ___(1)___ condenser vacuum.

and

per 18040-2, if needed, the Steam Dumps ___(2)___ operate.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | 22.2" Hg | will |
| B. | 22.2" Hg | will NOT |
| C. | 16.42" Hg | will |
| D. | 16.42" Hg | will NOT |

38. 053A4.03 001

At time 1000:

- Unit 1 is at 60% reactor power and lowering due to a loose part in the RCS.
- 18013-1, "Rapid Power Reduction," is in progress.

At time 1002:

- Unit 1 is at 46% reactor power.

Which one of the following completes the following statement?

Based on the given conditions, the Main Turbine load reduction ramp rate (1) within the limits of 18013-1,

and

the OATC is required to monitor T_{avg} and to trip the reactor when T_{avg} **first** lowers to (2) F.

- | | <u> (1) </u> | <u> (2) </u> |
|----|----------------|----------------|
| A. | is | 551 |
| B. | is | 557 |
| C. | is NOT | 551 |
| D. | is NOT | 557 |

39. 054AK1.02 001

Initial conditions:

- Unit 2 reactor trips due to a loss of all feedwater.
- 19231-2, "Response to Loss of Secondary Heat Sink," is entered.

Current conditions:

- All SG WR levels are 18% and slowly lowering.
- RCS temperature is 560 F and slowly rising.
- Crew is at the step to "Check if RCS Bleed and Feed is required."

Which one of the following completes the following statements?

Requirements for feed and bleed are met when a minimum of 3 S/G's WR levels lowered to less than __(1)___.

Main feedwater flow will be initially restored to one SG in order to __(2)___.

- A. (1) 28%
(2) prevent an SLI
- B. (1) 28%
(2) minimize the effects of SG thermal shock
- C. (1) 9%
(2) prevent an SLI
- D. (1) 9%
(2) minimize the effects of SG thermal shock

40. 055EK2.04 001

Given the following:

- Unit 1 reactor trips.
- 19100-1, "Loss of All AC Power," is in progress.

Which one of the following completes the following statement?

Based on the given conditions, in order to throttle SG #1 and SG #4 TDAFW pump discharge valves from the Control Room, battery __ (1) __ power must be conserved,

and

1PDIC-5180A, TDAFW Pump Controller, __ (2) __ permitted to be used to control TDAFW flow to the SGs.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | 1CD1B | is |
| B. | 1CD1B | is NOT |
| C. | 1AD1B | is |
| D. | 1AD1B | is NOT |

41. 056A2.08 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- Feedwater Heater 6B has a significant tube leak.
- ALB18-C06 FW HTR 6B HI-HI LVL is received.

Current conditions:

- 18016-1, "Condensate and Feedwater Malfunction," is in progress.
- Operators reduce Main Turbine load and power is stable at 99% RTP.

Which one of the following completes the following statement?

Based on the initial conditions, 1TI-5223, Feedwater Heater 6B Outlet, on the QMCB will indicate ___(1)___ than prior to the event,

and

per 18016-1, the operators ___(2)___ required to commence an additional turbine load reduction.

REFERENCES PROVIDED

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | lower | are |
| B. | lower | are NOT |
| C. | higher | are |
| D. | higher | are NOT |

42. 056AK3.01 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- All Train 'A' Containment Cooling Units are operating.

Current conditions:

- Reactor is tripped due to a loss of all off-site power.
- All equipment re-aligns as required.
- No operator action has been taken.

Which one of the following completes the following statement?

Based on the current conditions, the Train 'A' Containment Cooling Units were stopped, and then were re-started __ (1) __,

and

the reason for this re-starting method is to __ (2) __.

- A. (1) simultaneously
(2) maintain balanced air flow in containment
- B. (1) simultaneously
(2) more quickly restore air flow in containment
- C. (1) in pairs 20 seconds apart
(2) limit DG1A starting current
- D. (1) in pairs 20 seconds apart
(2) minimize NSCW water hammer

43. 057AA1.04 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- 1BY1B de-energizes due to a fault.

Current conditions:

- Reactor trip and SI occur.
- All load sequencing is complete.
- 19000-1, "Reactor Trip or Safety Injection," is entered.
- No operator action has been taken.

Which one of the following completes the following statement?

As the OATC checks ECCS valve alignment per 19000-1, 1LV-112D, RWST to CCP Suction, will indicate __(1)__,

and

1LV-112E, RWST to CCP Suction, will indicate __(2)__.

- | | __(1)__ | __(2)__ |
|----|---------|---------|
| A. | open | open |
| B. | open | closed |
| C. | closed | open |
| D. | closed | closed |

44. 059K3.01 001

Given the following:

- Unit 2 is at 100% reactor power.
- ALB15-C02 MFPT A SUCTION LO PRESS is received.
- ALB15-C06 MFPT B SUCTION LO PRESS is received.
- 2PI-4498, MFP Suction Pressure, indicates 257 psig.

Which one of the following completes the following statement?

Based on the given conditions, the standby Condensate Pump __(1)__ automatically started,

and

2PV-30223, Condensate Demin Bypass, __(2)__ automatically opened.

- | | __(1)__ | __(2)__ |
|----|---------|---------|
| A. | has | has |
| B. | has | has NOT |
| C. | has NOT | has |
| D. | has NOT | has NOT |

45. 061K3.02 001

Initial conditions:

- Unit 2 is at 100% reactor power.
- MDAFW pump 'A' is tagged out.

Current conditions:

- Inadvertent reactor trip occurs.
- TDAFW pump trips.
- All other equipment aligns as required.
- No operator action has been taken.

Which one of the following completes the following statement?

Based on the given conditions, SGs #1 and #4 NR levels (1) **rising**,

and

SGs #2 and #3 NR levels (2) **rising**.

- | | <u> (1) </u> | <u> (2) </u> |
|----|----------------|----------------|
| A. | are | are |
| B. | are | are NOT |
| C. | are NOT | are |
| D. | are NOT | are NOT |

46. 062K4.02 001

Initial condition:

- Unit 2 is at 55% reactor power.

Current conditions:

- 2NAA de-energizes due to a fault.
- ALB11-E06 UNDERVOLTAGE RCP BUS ALERT is received.

Which one of the following completes the following statement?

Based on the given conditions, the RCP 1E breakers ___(1)___ automatically trip open,

and

the electrical fault was on transformer ___(2)___ .

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | will | RAT 2A |
| B. | will | UAT 2A |
| C. | will NOT | RAT 2A |
| D. | will NOT | UAT 2A |

47. 063K5.04 001

Initial conditions:

- Unit 2 is at 100% reactor power.
- Battery Charger 2DD1CA is in service.
- Battery Charger 2DD1CB is in standby.

Current conditions:

- Ground fault occurs on Battery Charger 2DD1CA.
- Battery Charger 2DD1CB is placed in service.
- Battery Charger 2DD1CA is removed from service.

Which one of the following completes the following statement?

When the ground initially occurs, ALB34-C07 125 VDC SWGR 2DD1 TROUBLE ___(1)___ be received in the Control Room,

and

to meet Tech Spec LCO 3.8.4, "DC Sources - Operating," battery 2DD1B requires a **minimum** of ___(2)___ OPERABLE battery charger(s).

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | will | 1 |
| B. | will | 2 |
| C. | will NOT | 1 |
| D. | will NOT | 2 |

48. 064K5.06 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- DG1A is paralleled to the grid for a surveillance.

Current conditions:

- DG1A output is 800 kW while being removed from 1AA02.
- Lockout relay 186C actuates due to reverse power on DG1A.

Which one of the following completes the following statement?

Operating DG1A at low load should be minimized because it can lead to __ (1) __,

and

based on the current conditions, 1AA02-19, DG1A Output Breaker, __ (2) __ automatically opened.

- A. (1) inadequate turbocharger cooling
(2) has
- B. (1) inadequate turbocharger cooling
(2) has NOT
- C. (1) excessive carbon buildup in the engine
(2) has
- D. (1) excessive carbon buildup in the engine
(2) has NOT

49. 064K6.09 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- DG1B non-ESF Ventilation Fan is running due to high DG Building temperature.

Current conditions:

- Normal incoming supply breaker to 1BA03 trips open.
- DG1B starts and re-energizes its associated bus.
- All load sequencing is complete.
- No operator action has been taken.

Which one of the following completes the following statement?

Based on the current conditions, a DG1B ESF Ventilation Fan (1) **running**,

and

the DG1B non-ESF Ventilation Fan (2) require operator action to secure.

- | | <u> (1) </u> | <u> (2) </u> |
|----|----------------|----------------|
| A. | is | does |
| B. | is | does NOT |
| C. | is NOT | does |
| D. | is NOT | does NOT |

50. 065AA2.03 001

Initial conditions:

- Unit 2 is at 100% reactor power.
- 2PI-9361, Instrument Air Pressure, is lowering.
- 2PI-9377, Service Air Pressure, is lowering.
- 18028-C, "Loss of Instrument Air," is in progress.
- Unit 1 and Unit 2 air headers are NOT cross-tied.

Current condition:

- Crew manually trips the Unit 2 reactor per 18028-C.

Which one of the following completes the following statement?

Based on the given conditions, 2PV-9375, Service Air Dryer Inlet Isolation, (1)
closed,

and

the location of the air leak is on the (2) Air header.

- | | <u> </u> (1) <u> </u> | <u> </u> (2) <u> </u> |
|----|-------------------------|-------------------------|
| A. | is | Instrument |
| B. | is | Service |
| C. | is NOT | Instrument |
| D. | is NOT | Service |

51. 067AK3.02 001

Initial conditions:

- Seismic event occurs on site.
- Fire Protection System is NOT capable of supplying fire water.

Current conditions:

- Fire occurs in the Control Building.
- Fire Team has NOT been dispatched.

Which one of the following completes the following statement?

Based on the current conditions and per 13903-C, "Fire Protection System Operation," the Control Building Category 1 Standpipe ___(1)___ pressurized,

and

if required, a credited back-up fire water supply is the ___(2)___.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-------------------------------|
| A. | is | portable B.5.b pump |
| B. | is | Burke County EMA pumper truck |
| C. | is NOT | portable B.5.b pump |
| D. | is NOT | Burke County EMA pumper truck |

52. 068A3.02 001

Initial condition:

- Waste Monitor Tank (WMT) #9 release is in progress.

Current conditions:

- 1RX-018, Liquid Effluent Monitor, DPM TROUBLE light is lit.
- 1RE-018, Liquid Effluent Monitor, fails down scale **low**.

Which one of the following completes the following statement?

Based on the given conditions, the WMT #9 liquid release ___(1)___ automatically isolate,

and

the position of 1RV-018, Waste Discharge Isolation, ___(2)___ be **directly** checked on the IPC.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | will | can |
| B. | will | can NOT |
| C. | will NOT | can |
| D. | will NOT | can NOT |

53. 069AA1.03 001

Initial conditions:

- Unit 1 reactor trip and SI occur due to a LOCA.
- 19000-1, "Reactor Trip or Safety Injection," is entered.
- Verification of Immediate Operator Actions is complete.
- Containment pressure is 23.8 psig.

Current conditions:

- ALB06-D06 CNMT SPRAY ACTUATION is NOT lit.
- ALB06-E06 CNMT ISO PHASE A ACTUATION is NOT lit.

Which one of the following completes the following statement?

Based on the given conditions and per 19000-1, the **first** required action to be performed by the OATC is to actuate __(1)__,

and

this action will be directed by the __(2)__.

- | | __(1)__ | __(2)__ |
|----|-------------------|----------------------|
| A. | CIA | Foldout Page |
| B. | CIA | OATC Initial Actions |
| C. | Containment Spray | Foldout Page |
| D. | Containment Spray | OATC Initial Actions |

54. 073A1.01 001

Initial conditions:

- Unit 1 transfer of Gas Decay Tank #2 contents to Gas Decay Tank #4 is in progress.
- Auxiliary Building Supply and Exhaust Ventilation Units are in service.

Current conditions:

- 1RE-039A, Waste Gas Decay Tank - Radiogas, is in **high** alarm.
- 1RE-039B, Waste Gas Compressor - Radiogas, is in **high** alarm.

Which one of the following completes the following statement?

Based on the given conditions, rising activity level __ (1) __ be indicated on 1RE-12442C, Plant Vent Radiogas,

and

the running Auxiliary Building Ventilation Units __ (2) __ automatically trip.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | will | will |
| B. | will | will NOT |
| C. | will NOT | will |
| D. | will NOT | will NOT |

55. 076A2.05 001

Procedure title as follows:

- 17002-1, "Annunciator Response Procedure for ALB02"

Initial conditions:

- Unit 1 is at 100% reactor power.
- CCW pumps #1 and #3 are in service.
- CCW pump #5 is in standby.
- CCW 'A' Surge Tank level is 65% and stable.

Current conditions:

- One CCW 'A' Surge Tank level transmitter fails.
- ALB36-A01 4160 V SWGR 1AA02 TROUBLE is received.
- ALB02-A05 CCW TRAIN A SURGE TK LO-LO LVL is received.
- ALB02-A06 CCW TRAIN A LO HDR PRESS is received.
- ALB02-B06 CCW TRAIN A LO FLOW is received.
- 1LV-1850, Demin Water to CCW 'A' Tank, is NOT open.
- 18020-C, "Loss of Component Cooling Water," is entered.

Which one of the following completes the following statement?

Based on the given conditions, __ (1) __ CCW pump(s) tripped,

and

Per 17002-1, 1LV-1850, Demin Water to CCW 'A' Tank, __ (2) __ required to be **open**.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | ONLY 1 | is |
| B. | ONLY 1 | is NOT |
| C. | both | is |
| D. | both | is NOT |

56. 076AA2.04 001

Initial conditions:

- Unit 1 is in Mode 2 with a reactor start-up in progress.
- ALB05-B03 INTMD RADIATION ALARM is received.
- 1RE-48000, CVCS Letdown, is in **intermediate** alarm.
- 18014-C, "Primary Plant Chemistry," is in progress.
- Chemistry is taking samples of the RCS.

Current conditions:

- Chemistry reports the following sample results:
 - Cobalt-60 activity is stable.
 - Manganese-54 activity is stable.
 - Chloride levels are stable.
 - Dose Equivalent Iodine-131 activity is rising.
 - Iodine-133 activity is rising.

Which one of the following completes the following statements?

Tech Spec LCO 3.4.16, "RCS Specific Activity," ___(1)___ **applicable** in Mode 2.

Based on the given conditions, the reason for the 1RE-48000 alarm is a ___(2)___.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------------------|
| A. | is | leaking fuel assembly |
| B. | is | crud burst |
| C. | is NOT | leaking fuel assembly |
| D. | is NOT | crud burst |

57. 076K2.09 001

Given the following:

- Unit 1 is at 100% reactor power.
- ALB60-A01 INTAKE STRUCT SCREEN WASH SYS ALARM is received.
- Traveling Screen wash cycle automatically switches to high speed.

Which one of the following completes the following statement?

The Traveling Screens __ (1) __ capable of being powered from either unit,

and

the normal power supply to the Traveling Screens is __ (2) __.

- | | __(1)__ | __(2)__ |
|----|---------|----------|
| A. | are NOT | 1(2)NB01 |
| B. | are NOT | ANBS |
| C. | are | 1(2)NB01 |
| D. | are | ANBS |

58. 077AG2.4.49 001

Initial condition:

- Unit 1 is at 600 MWe with a power ascension in progress.

Current conditions:

- 18017-C, "Abnormal Grid Disturbances/Loss of Grid," Section 'A' for "Degraded Grid Conditions," is in progress.
- Main Generator output is stable at 710 MWe.
- Leading MVARs (negative) are lowering (more negative) due to grid instability.

Which one of the following completes the following statement?

If MVARs continue to lower with no operator action, __ (1) __ excitation of the Main Generator can occur,

and

if the Main Generator can NOT be maintained within the limits of the Reactive Capability Curve, the crew is required to **first** trip the __ (2) __.

- | | __ (1) __ | __ (2) __ |
|----|-----------|--------------|
| A. | over | reactor |
| B. | over | Main Turbine |
| C. | under | reactor |
| D. | under | Main Turbine |

59. 078A3.05 001

Given the following:

- Unit 2 reactor trip and SI occur due to a LOCA.
- 2HV-9378, Instrument Air to Containment, automatically closes.

Which one of the following completes the following statement?

2HV-9378 received a close signal **directly** from the __ (1) __ actuation,

and

2HV-9378 handswitch valve position indication is available on the __ (2) __.

- | | __ (1) __ | __ (2) __ |
|----|-----------|-----------|
| A. | SI | QPCP |
| B. | SI | QMCB |
| C. | CIA | QPCP |
| D. | CIA | QMCB |

60. 078AG2.4.18 001

Initial conditions:

- Unit 2 is in Mode 4 with a cooldown in progress.
- RHR Train 'A' is in service for temperature control.
- CCP 'A' is in service.
- Pressurizer level is lowering due to an RCS leak.
- 18004-C, "Reactor Coolant System Leakage," Section 'B', is entered.

Current condition:

- Crew is at Step B4 to "Check if RHR pumps should be stopped: Pressurizer Level less than 5% or RCS Subcooling less than 22 F."

Which one of the following completes the following statements?

Consider each statement separately.

The reason RHR pumps are stopped at Step B4 when conditions are met is to __ (1) __.

Per the major actions of 18004-C, if pressurizer level continues to lower, an SI pump __ (2) __ allowed to be started to inject into the RCS.

- | | __ (1) __ | __ (2) __ |
|----|-----------------------------------|-----------|
| A. | reduce the RCS leak rate | is |
| B. | reduce the RCS leak rate | is NOT |
| C. | protect the pumps from cavitation | is |
| D. | protect the pumps from cavitation | is NOT |

61. 078K2.01 001

Initial conditions:

- Unit 1 is at 100% reactor power.
- Air Compressor #4 is in service and aligned to Unit 1.

Current conditions:

- RAT '1A' and RAT '1B' de-energize due to a switchyard fault.
- DG1A and DG1B start and re-energize their associated buses.
- Reactor is NOT tripped.

Which one of the following completes the following statements?

Based on the current conditions, Air Compressor #4 is __ (1) __.

When the OATC trips the reactor, Air Compressor #4 will be __ (2) __.

- | | __ (1) __ | __ (2) __ |
|----|--------------|--------------|
| A. | energized | energized |
| B. | energized | de-energized |
| C. | de-energized | energized |
| D. | de-energized | de-energized |

62. 103G2.2.03 001

Initial condition:

- Both units are at 100% reactor power.

Current conditions:

- Tornado strikes the switchyard.
- All RATs are de-energized.
- All EDGs start and re-energize their associated buses.
- All load sequencing is complete.

Which one of the following completes the following statement?

Based on the current conditions, the **Unit 1** Auxiliary Containment Cooler and Reactor Cavity Cooler isolation valves are (1) ,

and

the **Unit 2** Auxiliary Containment Cooler and Reactor Cavity Cooler isolation valves are (2) .

- | | <u> (1) </u> | <u> (2) </u> |
|----|----------------|----------------|
| A. | open | open |
| B. | open | closed |
| C. | closed | open |
| D. | closed | closed |

63. G2.1.04 001

Given the following:

- Both units are at 100% reactor power.
- Operating Crew is standing 12 hours shifts.

Which one of the following completes the following statement?

Per NMP-OS-026, "License Administration," to maintain an active license, the NPO is required to perform the duties of a Reactor Operator for a **minimum** of ___(1)___ shifts,

and

this minimum number of shifts are required to be met each ___(2)___.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | 7 | month |
| B. | 7 | quarter |
| C. | 5 | month |
| D. | 5 | quarter |

64. G2.1.21 001

Which one of the following completes the following statements?

In accordance with NMP-AP-005, "Transient Response Guidelines," Transient Response Procedures __ (1) __ required to be version checked prior to use.

System Operating Procedures (SOP's) __ (2) __ required to be version checked prior to use when directed by Transient Response Procedures.

- | | __(1)__ | __(2)__ |
|----|---------|---------|
| A. | are | are |
| B. | are | are NOT |
| C. | are NOT | are |
| D. | are NOT | are NOT |

65. G2.1.34 001

Given the following:

- Unit 1 is preparing to shutdown for a refueling outage.
- 12004-1, "Power Operation (Mode 1)," is in progress.

Which one of the following completes the following statement?

Prior to the reactor shutdown, the VCT gas space is required to be purged with ___(1)___,

and

this is performed to reduce the RCS dissolved ___(2)___ concentration.

- | | ___(1)___ | ___(2)___ |
|----|----------------|-----------|
| A. | nitrogen | oxygen |
| B. | nitrogen | hydrogen |
| C. | carbon dioxide | oxygen |
| D. | carbon dioxide | hydrogen |

66. G2.2.01 001

Initial conditions:

- Unit 1 reactor is starting up.
- 12003-1, "Reactor Startup (Mode 3 to Mode 2)," is in progress.
- Estimated Critical Calculation is 100 steps on Control Bank 'C'.

Current conditions:

- Control Bank 'C' is at 20 steps.
- Inverse Count Rate Ratio (ICRR) plot is 0.06.
- Based on the ICRR, criticality is projected at 42 steps on Control Bank 'C'.

Which one of the following completes the following statement?

Based on the given conditions and per 12003-1, the crew is required to _____.

REFERENCES PROVIDED

- A. immediately trip the reactor
- B. insert Control Bank rods at least 750 pcm
- C. continue the startup and monitor for indications of criticality
- D. fully insert all Control Bank rods and leave the Shutdown Banks withdrawn

67. G2.2.07 001

Which one of the following completes the following statement?

Per NMP-AD-006, "Infrequently Performed Tests and Evolutions," the IPTE briefing ___(1)___ required to be conducted by Senior Line Management,

and

an activity that requires an IPTE briefing is ___(2)___.

- | | ___(1)___ | ___(2)___ |
|----|-----------|------------------------|
| A. | is | RCS vacuum refill |
| B. | is | SGBD resin replacement |
| C. | is NOT | RCS vacuum refill |
| D. | is NOT | SGBD resin replacement |

68. G2.2.21 001

Initial conditions:

- Unit 1 is at 7% reactor power with a startup in progress.
- 14807A-1, "Train 'A' MDAFW Pump and Check Valve Inservice and Response Time Test," is being performed.
- 1HV-5137 and 1HV-5139, MDAFW Pump 'A' Discharge Valves, were locally closed.
- MDAFW pump 'A' is started.

Current conditions:

- MDAFW pump 'A' is stopped.
- 14807A-1 is complete and MDAFW Train 'A' is returned to normal standby alignment.

Which one of the following completes the following statements?

Consider each statement separately.

During the performance of the surveillance, Tech Spec LCO 3.7.5, "Auxiliary Feedwater (AFW) System," __ (1) __ met.

Per 10000-C, "Operations Administrative Controls," 1HV-5137 and 1HV-5139 __ (2) __ normally be manually unseated and then stroked using the motor operator prior to returning to service.

- | | __ (1) __ | __ (2) __ |
|----|-----------|------------|
| A. | is | should NOT |
| B. | is | should |
| C. | is NOT | should NOT |
| D. | is NOT | should |

69. G2.3.12 001

Given the following:

- Unit 1 is at 100% reactor power.
- Containment entry is planned to investigate a leak.
- Entry crew is reviewing 00303-C, "Containment Entry," and 00008-C, "Plant Lock and Key Control," during the pre-job briefing.

Which one of the following completes the following statement?

Per 00303-C, the containment Personnel Airlock cage door is posted as a __(1)__ High Radiation Area,

and

per 00008-C, the Controlled Key used to open the Personnel Airlock cage door will have a tag that is colored __(2)__.

- | | __(1)__ | __(2)__ |
|----|---------|---------|
| A. | Very | blue |
| B. | Very | yellow |
| C. | Locked | blue |
| D. | Locked | yellow |

70. G2.4.06 001

Given the following:

- Unit 2 reactor trip and SI occur due to a SG tube rupture.
- 19030-2, "Steam Generator Tube Rupture," is in progress.

Which one of the following completes the following statement?

Per the 19030-2 Major Actions, the RCS cooldown to the target CETC temperature is performed __ (1) __ the RCS depressurization,

and

per 19030-2, ECCS flow should be terminated when the criteria are met to prevent __ (2) __.

- A. (1) before
(2) overfilling the ruptured SG
- B. (1) before
(2) pressurized thermal shock to the RCS
- C. (1) concurrently with
(2) overfilling the ruptured SG
- D. (1) concurrently with
(2) pressurized thermal shock to the RCS

71. G2.4.12 001

Given the following:

- Unit 2 reactor trip and SI occur due to a LOCA.
- IPC is NOT available.
- OATC initiates CSFST monitoring per 19200-2, "Critical Safety Function Status Tree," and reports the following:
 - Subcriticality GREEN
 - Core Cooling ORANGE
 - Heat Sink Not yet checked
 - Integrity Not yet checked
 - Containment Not yet checked
 - Inventory Not yet checked

Which one of the following completes the following statement?

Based on the given conditions and per 19200-2, the crew ___(1)___ required to immediately transition to the Core Cooling ORANGE path procedure,

and

the CSFSTs ___(2)___ required to be monitored continuously.

- | | | |
|----|-----------|-----------|
| | ___(1)___ | ___(2)___ |
| A. | is | are |
| B. | is | are NOT |
| C. | is NOT | are |
| D. | is NOT | are NOT |

72. G2.4.14 001

Given the following:

- Unit 1 is at 100% reactor power.
- RCS NR temperature instrument fails.
- 18001-C, "Primary Systems Instrumentation Malfunction," is entered.

Which one of the following completes the following statement?

Based on the given conditions and per NMP-AP-005, "Transient Response Guidelines," when performing Prompt Operator Actions, placekeeping ___(1)___ required,

and

when performing 18001-C, the crew ___(2)___ required to complete each step before continuing to the next step.

- | | ___(1)___ | ___(2)___ |
|----|-----------|-----------|
| A. | is | is |
| B. | is | is NOT |
| C. | is NOT | is |
| D. | is NOT | is NOT |

73. WE04EK1.05 001

Initial conditions:

- Unit 1 reactor trip and SI occur.
- 19112-1, "LOCA Outside Containment," is in progress.
- OATC closes 1HV-8809A, RHR Pump 'A' to Cold Legs, and the leak is isolated.
- OATC stops RHR pump 'A'.

Current condition:

- 19013-1, "Transfer to Cold Leg Recirculation," is in progress.

Which one of the following completes the following statement?

Per 19112-1, to determine the leak is isolated, the OATC is required to check for rising RCS __ (1) __,

and

when 19013-1 is complete, CCP 'A' __ (2) __ have a suction source.

- | | __ (1) __ | __ (2) __ |
|----|------------|-----------|
| A. | pressure | will |
| B. | pressure | will NOT |
| C. | subcooling | will |
| D. | subcooling | will NOT |

74. WE05EK3.16 001

Given the following:

- Unit 2 reactor trips.
- 19231-2, "Response to Loss of Secondary Heat Sink," is in progress.
- RCS bleed and feed is initiated.
- PORV 1PV-455 is open
- PORV 1PV-456 is closed

Which one of the following completes the following statement?

Per 19231-2, when RCS bleed and feed is initiated, the OATC is required to ensure at least one CCP ___(1)___ one SI Pump is running,

and

the minimum bleed flow path ___(2)___ currently established.

- | | | |
|----|-----------|-----------|
| | ___(1)___ | ___(2)___ |
| A. | or | is |
| B. | or | is NOT |
| C. | and | is |
| D. | and | is NOT |

75. WE11EK2.04 001

Initial condition:

- Unit 1 reactor trip and SI occur due to a LOCA.

Current conditions:

- 19111-1, "Loss of Emergency Coolant Recirculation," is in progress.
- Containment pressure is 2.9 psig.
- RCS pressure is 195 psig.
- Highest RCS That is 355 F.
- CETCs are 361 F.
- Crew is at the Step to "Depressurize RCS to reduce RCS subcooling: Check RCS Subcooling greater than 32 F [32 F ADVERSE]."

Which one of the following completes the following statements?

Consider each statement separately.

Based on the current conditions and per 19111-1, the **minimum** required RCS subcooling margin (1) available.

When the RCS depressurization is initiated, the crew will be required to use (2) .

- | | | |
|----|----------------|--------------------------|
| | <u> (1) </u> | <u> (2) </u> |
| A. | is | a Pressurizer PORV |
| B. | is | normal Pressurizer Spray |
| C. | is NOT | a Pressurizer PORV |
| D. | is NOT | normal Pressurizer Spray |

ILT-23 RO Exam Provided Reference Index

1. 18016-1, "Condensate and Feedwater Malfunction," Table 1 (ver. 2.1)
2. COLR, VEGP Unit 1 Cycle 23, Figure 3 (March 2020)

Vogle 2021 (ILT23) NRC RO Examination KEY

Answers

#	ID	Points	Type	0
1	001K1.12 1	1.00	MCS	D
2	002K3.03 1	1.00	MCS	C
3	003K1.10 1	1.00	MCS	B
4	004K2.02 1	1.00	MCS	C
5	005AA1.05 1	1.00	MCS	C
6	005K3.02 1	1.00	MCS	B
7	006K4.13 1	1.00	MCS	A
8	007EA1.05 1	1.00	MCS	A
9	007K5.07 1	1.00	MCS	D
10	008AA2.06 1	1.00	MCS	B
11	008K1.14 1	1.00	MCS	C
12	008K6.09 1	1.00	MCS	A
13	009EG2.2.22 1	1.00	MCS	C
14	010A1.09 1	1.00	MCS	B
15	011EK1.03 1	1.00	MCS	C
16	012A2.01 1	1.00	MCS	C
17	013A3.11 1	1.00	MCS	B
18	016K2.03 1	1.00	MCS	B
19	022A4.01 1	1.00	MCS	D
20	022AK2.10 1	1.00	MCS	D
21	022K4.04 1	1.00	MCS	C
22	026AK3.02 1	1.00	MCS	C
23	026G2.1.27 1	1.00	MCS	D
24	027AA1.06 1	1.00	MCS	B
25	027K5.01 1	1.00	MCS	A
26	028AA2.03 1	1.00	MCS	A
27	028K4.02 1	1.00	MCS	D
28	029EA2.13 1	1.00	MCS	D
29	029K6.10 1	1.00	MCS	B
30	032AG2.4.02 1	1.00	MCS	A
31	033AK1.01 1	1.00	MCS	B
32	038EG2.4.50 1	1.00	MCS	A
33	039K1.08 1	1.00	MCS	D
34	039K6.11 1	1.00	MCS	A
35	045A1.07 1	1.00	MCS	A
36	050A4.01 1	1.00	MCS	D
37	051AK2.10 1	1.00	MCS	B
38	053A4.03 1	1.00	MCS	C
39	054AK1.02 1	1.00	MCS	B
40	055EK2.04 1	1.00	MCS	A
41	056A2.08 1	1.00	MCS	B
42	056AK3.01 1	1.00	MCS	C
43	057AA1.04 1	1.00	MCS	B
44	059K3.01 1	1.00	MCS	A
45	061K3.02 1	1.00	MCS	C
46	062K4.02 1	1.00	MCS	D
47	063K5.04 1	1.00	MCS	A

Vogle 2021 (ILT23) NRC RO Examination KEY

Answers

#	ID	Points	Type	0
48	064K5.06 1	1.00	MCS	C
49	064K6.09 1	1.00	MCS	B
50	065AA2.03 1	1.00	MCS	A
51	067AK3.02 1	1.00	MCS	D
52	068A3.02 1	1.00	MCS	D
53	069AA1.03 1	1.00	MCS	C
54	073A1.01 1	1.00	MCS	B
55	076A2.05 1	1.00	MCS	B
56	076AA2.04 1	1.00	MCS	A
57	076K2.09 1	1.00	MCS	D
58	077AG2.4.49 1	1.00	MCS	C
59	078A3.05 1	1.00	MCS	D
60	078AG2.4.18 1	1.00	MCS	C
61	078K2.01 1	1.00	MCS	B
62	103G2.2.03 1	1.00	MCS	B
63	G2.1.04 1	1.00	MCS	D
64	G2.1.21 1	1.00	MCS	D
65	G2.1.34 1	1.00	MCS	B
66	G2.2.01 1	1.00	MCS	B
67	G2.2.07 1	1.00	MCS	A
68	G2.2.21 1	1.00	MCS	D
69	G2.3.12 1	1.00	MCS	D
70	G2.4.06 1	1.00	MCS	A
71	G2.4.12 1	1.00	MCS	C
72	G2.4.14 1	1.00	MCS	D
73	WE04EK1.05 1	1.00	MCS	A
74	WE05EK3.16 1	1.00	MCS	B
75	WE11EK2.04 1	1.00	MCS	C
SECTION 1 (75 items)		75.00		