

**U.S. Nuclear Regulatory Commission**  
**Site-Specific SRO Written Examination****Applicant Information**

Name:

Date: **07/11/2013**Facility/Unit: **Oconee**

Region:

I ☐ II ☒ III ☐ IV ☐Reactor Type: W ☐ CE ☐ BW ☒ GE ☐

Start Time:

Finish Time:

**Instructions**

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. To pass the examination you must achieve a final grade of at least 80.00 percent overall, with 70.00 percent or better on the SRO-only items if given in conjunction with the RO exam; SRO-only exams given alone require a final grade of 80.00 percent to pass. You have 8 hours to complete the combined examination, and 3 hours if you are only taking the SRO portion.

**Applicant Certification**

All work done on this examination is my own. I have neither given nor received aid.

\_\_\_\_\_  
Applicant's Signature**Results**RO/SRO-Only/Total Examination Values        75   /   25   /  100  Points

Applicant's Scores      \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Points

Applicant's Grade      \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Percent

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 1  
(1 point)

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Given the following Unit 1 conditions:

- The reactor tripped from 100% power
- A Main Steam relief valve is stuck OPEN
- An excessive cooldown occurred
- ES-1 and ES-2 actuated
- The cooldown has been stopped and RCS temperature is 528 °F and slowly rising
- Indicated pressurizer level is 255 inches and increasing.

- 1) The first procedure that will be used to control pressurizer level is (1).
- 2) The indicated pressurizer level that will first require entry into Technical Specification 3.4.9 (Pressurizer) ACTION statement is (2) inches.

Which ONE of the following completes the statements above?

- A.
    1. EOP Rule 5 (MSLB)
    2. 265
  - B.
    1. Enclosure 5.5 (Pzr and LDST Level Control)
    2. 265
  - C.
    1. EOP Rule 5 (MSLB)
    2. 285
  - D.
    1. Enclosure 5.5 (Pzr and LDST Level Control)
    2. 285
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 2**  
(1 point)

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Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%

Current Conditions:

- Reactor power = 95% and decreasing
- 1RC-1 indicates open
- 1RC-66 indicates open
- Pzr level = 255 inches increasing
- RCS Wide Range pressure = 2190 psig and decreasing
- 1SA-18 A-1 Pressurizer Relief Valve Flow Statalarm is locked in
- 6 LED lights are illuminated for 1RC-66 on the Pressurizer Relief Valve Flow Monitor

Which ONE of the following completes the statements listed below?

- 1) In accordance with the immediate manual actions of AP/1/A/1700/044, (1) is required to be closed at this time.
  - 2) This transient could have been caused by the failure of a median selected controlling narrow range RCS pressure signal being supplied from RPS Channel (2).
- A.     1. only 1RC-4  
       2. E
- B.     1. only 1RC-4  
       2. C
- C.     1. 1RC-1, 1RC-3 and 1RC-4  
       2. B
- D.     1. 1RC-1, 1RC-3 and 1RC-4  
       2. A
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 3  
(1 point)

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Given the following Unit 1 conditions:

Time = 0800

- SCM = 0° F
- Reactor Power is < 1%
- A Small Break LOCA is in progress
- EOP Immediate Manual Actions are complete
- EOP Enclosure 5.1 (ES Actuation) is in progress

Time = 0804

- SCM = 0° F
- RCPs 1A1, 1A2, 1B1 and 1B2 are running
- EOP Rule 2 (Loss of SCM) is initiated
- ES Channel 1 failed to go to manual
- The ES ODD Voter is in OVERRIDE
- ES Channel 3 was manually initiated
- RCS WR Pressure is 500 psig and stable

Which ONE of the following completes the statements listed below?

- 1) In accordance with EOP Rule 2, RCPs should be (1) by the operator at 0804.
  - 2) In accordance with EOP Enclosure 5.1, prior to stopping the 1A LPI pump (2).
    - A. 1. stopped  
2. ES Channel 3 must be RESET
    - B. 1. stopped  
2. NO other actions are required
    - C. 1. left running  
2. ES Channel 3 must be RESET
    - D. 1. left running  
2. NO other actions are required
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 4**  
(1 point)

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Given the following Unit 3 conditions:

Initial conditions

- Reactor power = 100%
- 3A CFT Level = 13.56 feet
- 3A CFT Pressure = 580 psig
- 3B CFT Level = 12.70 feet
- 3B CFT Pressure = 585 psig

Current conditions:

- A Reactor trip occurs due to a Large Break LOCA

Which ONE of the following statements below describes the effects resulting from 3A and 3B Core Flood Tank conditions?

- A. 3A CFT will discharge an inadequate volume of water into the core due to the CFT level.
  - B. 3A CFT will discharge an inadequate volume of water into the core due to the CFT pressure.
  - C. 3B CFT will discharge an inadequate volume of water into the core due to the CFT level.
  - D. 3B CFT will discharge an inadequate volume of water into the core due to the CFT pressure.
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question:** 5  
(1 point)

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Given the following Unit 1 conditions:

- Core Thermal Power = 100%.

Current conditions:

- A Station Blackout occurs at 0600.
- AP/0/A/1700/025 (Standby Shutdown Facility Emergency Operating Procedure) has been initiated.
- 1XSF is being powered from 0XSF.

Based on the current conditions, which ONE of the following completes the statements listed below?

- 1) In accordance with station Time Critical Actions, SSF RCMU flow must be established to Unit 1 RCP seals no later than (1).
  - 2) 1HP-20 (RCP Seal Return) (2) be operated from Unit 1 Control Room at this time.
- A.     1. 0614  
          2. can
- B.     1. 0620  
          2. can
- C.     1. 0614  
          2. cannot
- D.     1. 0620  
          2. cannot
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 6**  
(1 point)

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Given the following Unit 1 conditions:

- Reactor power = 100%
- SASS is in manual
- ICCM Train B is off-line for maintenance
- PZR Level Select Pushbutton #2 is selected on 1UB1
- 1SA-02 C-3 RC (PZR Level High/Low) Statalarm is in alarm
- 1SA-02 C-4 RC (PZR Level Emergency High/Low) Statalarm is in alarm
- PZR level #2 Dixon meter on 1UB1 is failed high
- Actual PZR level is 215 inches and decreasing
- 1HP-120 (RC Volume Control) is in automatic and fully closed

Unit 1 Current Conditions:

- AP/1/A/1700/014 (Loss of Normal HPI Makeup AND/OR RCP Seal Injection) has been initiated
- PZR Level is being controlled at 220 inches with 1HP-120 in HAND

Based on the current conditions, which ONE of the following completes the statements listed below?

- 1) A condition that would allow 1HP-120 to be placed back in AUTO would be selecting PZR Level Select Pushbutton # (1) .
  - 2) After the appropriate PZR Level Select Pushbutton is selected, the PZR Emergency High/Low Statalarm will (2) .
- A.     1. 1  
         2. clear
- B.     1. 3  
         2. clear
- C.     1. 1  
         2. remain in alarm
- D.     1. 3  
         2. remain in alarm
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 7  
(1 point)

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Given the following Unit 1 conditions:

- Unit shutdown is in progress.
- LPI is aligned in the switchover mode.
- RCS Pressure = 150 psig.

Which ONE of the following completes the statements listed below?

- 1) If (1) fails closed a loss of decay heat removal will occur.
  - 2) In accordance with AP/26 (Loss of Decay Heat Removal), heat removal will be restored by (2) to control the cooldown.
- A.     1. 1LPSW-4  
          2. aligning the LPI system in high pressure mode
- B.     1. 1LPSW-4  
          2. aligning the LPI system to the other cooler in normal mode
- C.     1. 1LPSW-5  
          2. aligning the LPI system in high pressure mode
- D.     1. 1LPSW-5  
          2. aligning the LPI system to the other cooler in normal mode
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 8**  
(1 point)

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Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- The Primary Instrument Air Compressor is isolated for maintenance

Current conditions:

- 1SA-9 A-2 (RCW Header Pressure Low) Statalarm is received

Which ONE of the following completes the statements listed below?

- 1) In accordance with OP/0/A/1106/27 (Instrument Air System), (1) Pressure Service Water may be lined up to provide an alternate source of cooling water to the Backup (Worthington) Instrument Air Compressors.
  - 2) 1SA-9 A-2 may indicate a reduction in cooling provided to the RCP (2) Coolers.
- A.     1. Low  
          2. Seal
- B.     1. Low  
          2. Seal Return
- C.     1. High  
          2. Seal
- D.     1. High  
          2. Seal Return
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 9**  
(1 point)

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Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 60%
- 1A1 RCP was previously secured due to high vibrations

Current conditions:

- LDST level = 39"
- The Reactor is tripped.
- EP/1/A/1800/001 (EOP SGTR Tab) has been initiated due to a SGTR on 1B S/G
- RCS depressurization methods are inadequate in minimizing core SCM

Which one of the following completes the statements listed below?

- 1) In accordance with the EOP Steam Generator Tube Rupture Tab, (1) temperature should be used to determine pressurizer spray nozzle delta T.
  - 2) In accordance with the EOP Steam Generator Tube Rupture Tab, Auxiliary Pressurizer Spray may be initiated when pressurizer spray nozzle delta T is less than (2) degrees F.
- A.     1. LDST  
       2. 410
- B.     1. LDST  
       2. 470
- C.     1. BWST  
       2. 410
- D.     1. BWST  
       2. 470
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 10**  
(1 point)

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Given the following Unit 3 conditions:

Initial conditions:

- Time = 0600
- Rule 1 (ATWS / Unanticipated Nuclear Power Production) has been initiated

Current conditions:

- Time = 0603
- RCS pressure is 2455 psig and increasing

Which ONE of the following completes the statements listed below?

- 1) In accordance with Rule 1, an operator will be dispatched to open the Unit 3 CRD 600V normal power supply breaker at 3X9 and alternate 600V power supply breaker at (1).
- 2) Based on the current conditions, DSS (2) open all four CRD breakers to de-energize Control Rod Groups 1-7.

Which ONE of the following completes the statements above?

- A.
    1. 1X1
    2. will
  - B.
    1. 2X2
    2. will
  - C.
    1. 1X1
    2. will NOT
  - D.
    1. 2X2
    2. will NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 11**  
(1 point)

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Given the following Unit 1 conditions:

Time = 0600

- Reactor power = 35%

Time = 0601

- Both Main FDW pumps trip

Time = 0610

- 1A SG level = 30 inches XSUR stable
- 1B SG level = 36 inches XSUR increasing

1) At 0600, 1RIA-59 & 1RIA-60   (1)   be used to determine the SG tube leak rate.

2) At 0610, SG level response is due to   (2)  .

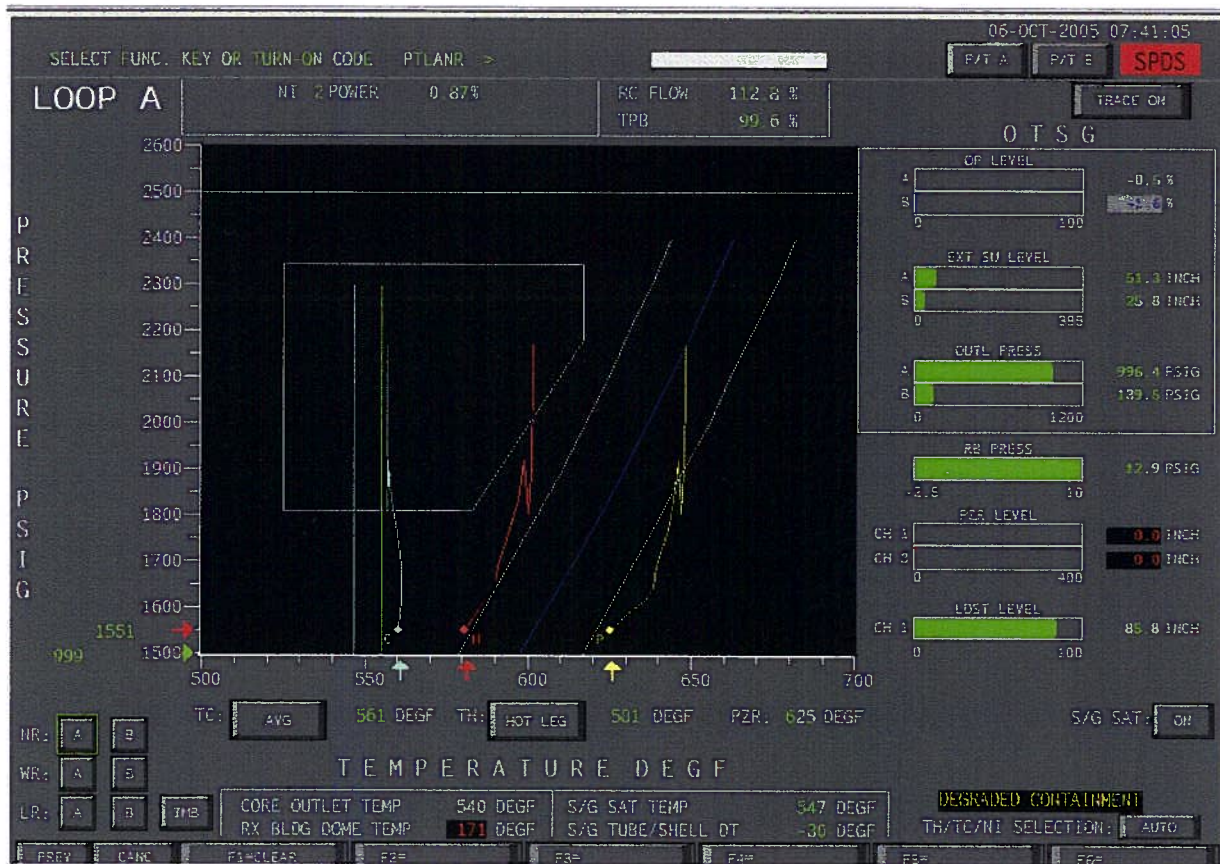
Which ONE of the following completes the statements above?

- A.    1. can  
      2. a loss of Instrument Air to 1FDW-316
  - B.    1. can  
      2. a primary to secondary rupture in the 1B SG
  - C.    1. cannot  
      2. a loss of Instrument Air to 1FDW-316
  - D.    1. cannot  
      2. a primary to secondary rupture in the 1B SG
-

# Oconee Nuclear Station

## ILT43 ONS SRO NRC Examination

**Question: 12**  
(1 point)



Unit 1 plant conditions:

- Main Steam Line Break occurred 20 seconds ago
- Plant response as indicated above

- 1) Digital ES channels (1) should have automatically actuated.
- 2) Diverse HPI (2) have automatically actuated.

Which ONE of the following completes the statements above?

- A.
  1. Channels 1 through 8
  2. should
- B.
  1. Channels 1 and 2 ONLY
  2. should
- C.
  1. Channels 1 through 8
  2. should NOT
- D.
  1. Channels 1 and 2 ONLY
  2. should NOT

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 13**  
(1 point)

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Given the following Unit 1 conditions:

- Reactor power = 100%

Which ONE of the following will result in an AUTOMATIC trip of the Main Turbine?

- A. EHC header pressure 1150 psig
  - B. High Moisture Separator Reheater level on one level switch on two of four MSRHS
  - C. 780 psig discharge pressure on BOTH Main Feedwater pumps
  - D. 72 psig hydraulic oil pressure on BOTH Main Feedwater pumps
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 14**  
(1 point)

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Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%

Current conditions:

- Station Blackout (power has NOT been restored)
- RCS Temperatures 30 minutes after trip
  - Tc = 548°F
  - Th = 583°F
  - CETCs = 585°F
- SG Pressures = 1010 psig stable

Which ONE of the following describes the response of RCS temperature indications over the next five minutes?

	<u>RCS Tcold</u>	<u>CETC</u>
A.	Approximately Stable	Approximately Stable
B.	Approximately Stable	Increasing
C.	Decreasing	Approximately Stable
D.	Decreasing	Increasing

---

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 15**

(1 point)

- 
- 1) Automatic control circuits will close the associated feeder breakers of 1X7, 2X4 & 3X4 after a load shed has occurred and a \_\_\_\_ (1) \_\_\_\_ second timer has timed out.
- 2) The reason 1X7, 2X4 & 3X4 load shed is to \_\_\_\_ (2) \_\_\_\_.

Which ONE of the following completes the statements above?

- A.     1. 30  
       2. ensure the integrity of the RCP seals
- B.     1. 30  
       2. prevent overloading the CT-4 or CT-5 transformers
- C.     1. 60  
       2. ensure the integrity of the RCP seals
- D.     1. 60  
       2. prevent overloading the CT-4 or CT-5 transformers
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 16**  
(1 point)

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Given the following Unit 2 conditions:

Initial conditions:

- Reactor power = 100%
- Pressurizer (PZR) Level 1 selected
- 2HP-120 (RC Volume Control) in AUTOMATIC
- SASS in MANUAL

Current conditions:

- ICCM Train "A" experiences a total loss of power

2HP-120 will (1) and will (2) to control PZR level.

Which ONE of the following completes the statement above?

- A.
    - 1. automatically swap to manual
    - 2. need to be throttled closed
  - B.
    - 1. remain in automatic
    - 2. need to be throttled closed
  - C.
    - 1. automatically swap to manual
    - 2. need to be throttled open
  - D.
    - 1. remain in automatic
    - 2. need to be throttled open
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 17**  
(1 point)

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Given the following plant conditions:

Initial conditions:

- ALL three Units Reactor power = 100%
- 3CB battery is inoperable due to low cell voltages

Current conditions:

- 2CA battery is inoperable due to the failure of the 2CA Battery Charger

Unit(s) \_\_\_\_\_ do/does NOT meet the minimum requirements of LCO 3.8.3 (DC Sources –Operating).

Which ONE of the following completes the statement above?

- A. 2 ONLY
  - B. 2 and 3 ONLY
  - C. 3 ONLY
  - D. 1, 2, and 3
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 18**  
(1 point)

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Given the following Unit 2 conditions:

- 2SA-18/B-11 (TURBINE BSMT WATER LEVEL ALERT) is in alarm
- 2SA-18/A-11 (TURBINE BSMT WATER EMERGENCY HIGH LEVEL) is in alarm
- Condenser vacuum = 5 inches Hg stable
- AP/1/A/1700/010 Turbine Building Flood is in progress
- EOP Turbine Building Flood Tab is in progress

1) Decay heat is being removed by using the (1) .

2) When LPSW is lost, All operating RCPs are stopped (2) .

Which ONE of the following completes the statements above?

- A.
    - 1. Atmospheric Dump Valves
    - 2. to minimize heat input to the RCS
  - B.
    - 1. Atmospheric Dump Valves
    - 2. due to loss of cooling water
  - C.
    - 1. Turbine Bypass Valves
    - 2. to minimize heat input to the RCS
  - D.
    - 1. Turbine Bypass Valves
    - 2. due to loss of cooling water
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 19

(1 point)

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Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 68% stable
- 1B2 RCP secured
- Control Rod Group 7 position = 65% withdrawn

Current conditions:

- Control Rod Group 7 Rod 1 drops to 40% withdrawn

Which ONE of the following completes the statement below:

The CRD system (1) generate a runback and the MAXIMUM final power level (Core Thermal Power) directed by AP/1 (Unit Runback) is (2).

- A.    1. will  
      2.  $\leq 60\%$
  - B.    1. will  
      2.  $\leq 45\%$
  - C.    1. will NOT  
      2.  $\leq 60\%$
  - D.    1. will NOT  
      2.  $\leq 45\%$
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 20**  
(1 point)

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Given the following Unit 1 conditions:

Time = 22:00

- Reactor power = 100%
- Turbine trip

Time = 22:05

- Reactor power = 11% slowly decreasing

- 1) In accordance with Rule 6 (HPI), HPI may be throttled when (1) NIs are  $\leq 1\%$ .
- 2) Power level is used to determine if throttling HPI is appropriate because it ensures that reactor power is (2).

Which ONE of the following completes the statements above?

- A.
    1. Wide Range
    2. below the point of adding heat
  - B.
    1. Wide Range
    2. within the capacity of the EFDW system
  - C.
    1. Power Range
    2. below the point of adding heat
  - D.
    1. Power Range
    2. within the capacity of the EFDW system
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 21  
(1 point)

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Given the following Unit 1 conditions:

- Reactor power = 80%
- The ICS SG Master controller is in MANUAL
- A condenser air leak has caused vacuum to slowly decrease with a corresponding increase in feedwater temperature

As the feedwater temperature increases, ICS:

- 1) \_\_\_\_ (1) \_\_\_\_ adjust feedwater flow.
- 2) \_\_\_\_ (2) \_\_\_\_ cause control rods to move due to a reactor cross limit.

Which ONE of the following completes the statements above?

- A.     1. will  
          2. will
  - B.     1. will  
          2. will NOT
  - C.     1. will NOT  
          2. will
  - D.     1. will NOT  
          2. will NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 22**

(1 point)

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Given the following Unit 3 conditions:

- Reactor in MODE 6
- Core offload in progress
- Main Fuel Bridge is withdrawing a fuel assembly that appears to be binding

The (1) interlock will stop the withdrawal of the fuel assembly to prevent fuel Damage. The load setpoint for this interlock is (2).

Which ONE of the following completes the statement above?

- A.     1. TS-1 (Overload Bypass)  
          2. 2500 lb
  - B.     1. TS-1 (Overload Bypass)  
          2. 2000 lb
  - C.     1. TS-2 (Hoist Interlock Bypass)  
          2. 2500 lb
  - D.     1. TS-2 (Hoist Interlock Bypass)  
          2. 2000 lb
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 23**  
(1 point)

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Given the following Unit 1 conditions:

Initial conditions:

- Reactor in MODE 6
- Equipment hatch is open with PORC approval
- RB Purge in operation
- Fuel movement in progress

Current conditions:

- 1SA-08/B-9 PROCESS MONITOR RADIATION HIGH in alarm
- The Reactor Building Purge system has isolated

- 1) UNIT VENT MONITOR 1RIA (1) in HIGH alarm would have caused the isolation.
- 2) If the equipment hatch is closed 33 minutes later, it (2) meet the requirement for establishing containment closure in accordance with OP/1/A/1502/009, CONTIANMENT CLOSURE CONTROL.

Which ONE of the following completes the statements above?

- A.     1. 44  
          2. does
  - B.     1. 44  
          2. does not
  - C.     1. 45  
          2. does
  - D.     1. 45  
          2. does not
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 24  
(1 point)

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Given the following Unit 1 conditions:

- Reactor power = 80% for the last week
- Chemistry reports the following:
  - RCS Gross Activity = 1.1 micro ci/ml
  - DEI activity = 0.7 micro ci/ml
- AP/21 (High Activity in RCS) entry has been made

- 1) AP/21 \_\_\_\_\_ (1) \_\_\_\_\_ require power to be reduced.
- 2) If a power reduction is directed by AP/21 (not to comply with Tech Specs or directed by the OSM) the MAXIMUM rate of power reduction is  $\leq$  \_\_\_\_\_ (2) \_\_\_\_\_.

Which ONE of the following completes the statement above?

- A.     1. does  
       2. 3% FP/hr
  - B.     1. does  
       2. 10% FP/hr
  - C.     1. does NOT  
       2. 3% FP/hr
  - D.     1. does NOT  
       2. 10% FP/hr
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 25

(1 point)

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Given the following Unit 2 conditions:

- Reactor power = 100%
- 2SA-18/A-11, TURBINE BSMT WATER EMERGENCY HIGH LEVEL, is in alarm
- Turbine Building flooding is confirmed
- The EOP is entered

- 1) In the Turbine Building Flooding tab of the EOP, Emergency Feedwater pumps (1) required to be utilized to fill the Steam Generators in addition to the Main Feedwater pumps.
- 2) While maximizing feed to the SGs, the MAXIMUM feed rate limits of Rule 7 (SG Feed Control) (2) apply while maintaining  $T_{ave} \geq 532$  °F.

Which ONE of the following completes the statements above?

- A.
    1. are
    2. do
  - B.
    1. are
    2. do not
  - C.
    1. are not
    2. do
  - D.
    1. are not
    2. do not
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 26**  
(1 point)

---

Unit 3 initial plant conditions:

- Reactor power = 100%
- SBLOCA occurs

Current conditions:

- Reactor has tripped
- ALL SCM's = "0"
- 3C HPI pump fails to start
- 3HP-409 is open
- "A" HPI Header flow = 485 gpm
- "B" Cross Header flow = 410 gpm
- Seal injection = 40 gpm

1) HPI flow   (1)   have to be throttled in accordance with Rule 6 (HPI).

2) HPI flow   (2)   be adequate for the worst case SBLOCA.

- A.     1. does  
       2. will
- B.     1. does  
       2. will not
- C.     1. does not  
       2. will
- D.     1. does not  
       2. will not
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 27**  
(1 point)

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Given the following Unit 2 conditions:

Initial conditions:

- Main steam line break occurred on the 2A SG outside of containment
- The EHT tab of the EOP was completed
- The crew transitioned to the Forced Cooldown (FCD) Tab

Current conditions:

- ALL RCPs are OFF
  - The decision has been made to perform a natural circulation cooldown
  - SCM is currently 105°F
- 1) Level in the 2B SG should be maintained at   (1)   while performing the cooldown.
- 2) The current RCS SCM   (2)   meet the minimum requirement in the FCD tab to begin RCS depressurization as part of the cooldown.

Which ONE of the following completes the statements above?

- A.     1. 240" XSUR  
       2. does
- B.     1. 240" XSUR  
       2. does NOT
- C.     1. 270" XSUR  
       2. does
- D.     1. 270" XSUR  
       2. does NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 28  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- 1RC-1 fails open
- RCS pressure = 2200 psig decreasing

Current conditions:

- RCS pressure = 2100 psig decreasing
- 1RC-1 and 1RC-3 fail to close
- 1AP-44 "Abnormal Pressurizer Pressure Control" is entered

- 1) In accordance with 1AP-44, the \_\_\_\_ (1) \_\_\_\_.
- 2) IF the reactor is tripped, the \_\_\_\_ (2) \_\_\_\_ stopped, then if pressure continues to decrease additional RCPs are stopped.

Which ONE of the following completes the statement above?

- A.     1. reactor is required to be tripped regardless of power  
       2. 1A1 RCP ONLY is
- B.     1. reactor is required to be tripped regardless of power  
       2. 1A1 and 1A2 RCPs are
- C.     1. reactor is required to be tripped only if above 70% power  
       2. 1A1 RCP ONLY is
- D.     1. reactor is required to be tripped only if above 70% power  
       2. 1A1 and 1A2 RCPs are
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 29**

(1 point)

---

Given the following Unit 3 plant conditions:

- Reactor power is in the power range
- 3 RCPs operating

1) To meet the interlock to start the 4<sup>th</sup> RCP, the MAXIMUM reactor power is (1).

2) The reason for the above interlock is to prevent (2).

Which ONE of the following completes the statements above?

- A.     1. 40%  
       2. a reactivity excursion
  - B.     1. 40%  
       2. core lift
  - C.     1. 50%  
       2. a reactivity excursion
  - D.     1. 50%  
       2. core lift
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 30**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- 1A HPI pump operating
- A plant transient occurs

Current conditions:

- RC MAKEUP FLOW = 0 gpm stable
- SEAL INLET HDR FLOW = 32 gpm stable

- 1) In accordance with the Limits and Precautions of OP/1/A/1104/002 (HPI System) the 1A HPI pump \_\_\_\_ (1) \_\_\_\_ above the MINIMUM flow required for indefinite operation.
- 2) This MINIMUM flow is based on \_\_\_\_ (2) \_\_\_\_.

Which ONE of the following completes the statements above?

- A.
    1. is
    2. possible HPI pump damage
  - B.
    1. is
    2. minimizing thermal shock to the HPI injection nozzle thermal sleeves
  - C.
    1. is NOT
    2. possible HPI pump damage
  - D.
    1. is NOT
    2. minimizing thermal shock to the HPI injection nozzle thermal sleeves
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 31**  
(1 point)

---

Given the following Unit 2 conditions:

Initial conditions:

- Reactor in MODE 6
- The Fuel Transfer Canal is flooded

Current conditions:

- All LPI pumps trip and cannot be restored
- The crew has entered AP/2/A/1700/026, Loss of Decay Heat Removal
- 2LP-1 and 2LP-2 are OPEN

Which ONE of the following describes the appropriate actions to take in accordance with AP/2/A/1700/026?

- A. Initiate Enclosure 5.7 (DHR Using SF Cooling) and align the "B" SF cooling pump to take suction from the decay heat drop line and discharge to the SF pool.
  - B. Initiate Enclosure 5.7 (DHR Using SF Cooling) and align the "B" SF cooling pump to take suction from the FTC deep end and discharge to the SF pool.
  - C. Align HPI for injection mode with water flowing through the core and out the lowest RCS opening into the FTC.
  - D. Align HPI for injection mode with water flowing through the core and out the lowest RCS opening into the RB Basement.
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 32

(1 point)

---

Given the following Unit 1 conditions:

- A Reactor trip from 100% power has occurred due to a Small-Break LOCA.
- EOP Enclosure 5.1 (ES Actuation) in progress
- 1HP-24 and 1HP-25 failed CLOSED
- '1A', '1B' and '1C' HPI Pumps are running

1) '1A' and '1B' LPI pumps \_\_\_\_ (1) \_\_\_\_ required to be started.

2) One HPI pump \_\_\_\_ (2) \_\_\_\_ required to be secured.

Which ONE of the following completes the statements above?

- A.     1. are  
       2. is
  - B.     1. are  
       2. is not
  - C.     1. are not  
       2. is
  - D.     1. are not  
       2. is not
-

# Oconee Nuclear Station

## ILT43 ONS SRO NRC Examination

Question: 33  
(1 point)

---

Given the following Unit 1 conditions:

- Quench Tank pressure is 25 psig due to 1 RC-66 (PORV) leaking by
- Quench Tank pressure is being lowered using Enclosure 4.5 (Lower QT Pressure) of OP/1/A/1104/17, Quench Tank Operations
- 1GWD-12 (QUENCH TANK VENT INSIDE RB) is OPEN
- Vent Header Pressure is +3 inches
- GWD-1 is in AUTO

- 1) In accordance with OP/1/A/1104/17, 1GWD-13 (QUENCH TANK VENT ~~INSIDE~~ <sup>Gen</sup> RB) should be (1) to lower Quench Tank pressure. <sub>outside</sub>
- 2) GWD-1 is initially expected to (2) in response to the current vent header pressure.

Which ONE of the following completes the statements above?

- A. 1. cycled open and closed  
2. open
- B. 1. cycled open and closed  
2. close
- C. 1. opened continuously  
2. open
- D. 1. opened continuously  
2. close
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 34**  
(1 point)

---

Given the following Unit 1 Conditions:

- Reactor power = 100%

- 1) \_\_\_\_ (1) \_\_\_\_ would result in an increase in CC Cooler outlet temperature °F.
- 2) Letdown Cooler CC outlet temperature is monitored by \_\_\_\_ (2) \_\_\_\_.

Which ONE of the following completes the statements above?

- A.
    1. Throttling open 1HP-7
    2. OAC indication ONLY
  - B.
    1. Throttling open 1HP-7
    2. OAC indication AND Control Room temperature gage
  - C.
    1. Placing 1HP-14 in "BLEED"
    2. OAC indication ONLY
  - D.
    3. Placing 1HP-14 in "BLEED"
    1. OAC indication AND Control Room temperature gage
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 35**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- '1B' CC Pump is in ON and is running.
- '1A' CC Pump is in AUTO and is off.
- The air supply to 1CC-8 completely severs.

Current conditions:

- Operators have manually re-opened 1CC-8.

1) '1B' CC Pump \_\_\_\_ (1) \_\_\_\_ when the air supply to 1CC-8 severs.

2) '1A' CC Pump \_\_\_\_ (2) \_\_\_\_ automatically start when 1CC-8 is manually opened.

Which ONE of the following completes the statements above?

- A.     1. trips  
       2. will
  - B.     1. trips  
       2. will NOT
  - C.     1. remains running  
       2. will
  - D.     1. remains running  
       2. will NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 36**  
(1 point)

---

Which ONE of the following, concerning Unit 1 Group C Pressurizer heaters, completes the statement:

Unit 1 Group C Pressurizer heaters are powered from MCC\_\_\_(1)\_\_\_, and \_\_\_(2)\_\_\_ be controlled from the Unit 1 Aux Shutdown Panel.

- A.     1. 1XSF  
       2. can
  - B.     1. PXSF  
       2. can
  - C.     1. 1XSF  
       2. can NOT
  - D.     1. PXSF  
       2. can NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 37**  
(1 point)

---

Given the following Unit 1 Conditions:

Time = 1200

- Reactor power = 100%
- 1B RPS Channel RCS Pressure fails LOW
- 1B RPS Channel is inadvertently placed in "Shutdown Bypass"

Time = 1230

- 1C RPS Channel loses power

- 1) At 1200, the RPS trip logic is   (1)  .
- 2) At 1230, an automatic reactor trip   (2)   occur.

Which ONE of the following completes the statements above?

- A.     1. 1/3  
       2. will
- B.     1. 2/3  
       2. will
- C.     1. 1/3  
       2. will NOT
- D.     1. 2/3  
       2. will NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 38  
(1 point)

---

Given the following Unit 1 conditions:

Time = 1200

- Reactor trips from 100% power due to a 1A MSLB
- Core SCM = 0°F
- All NIs  $\leq 1\%$

Time = 1212

- RCS temperature has been stabilized at 498°F

Time = 1220

- Core SCM = 0°F stable
- Pzr level = 120 inches increasing

- 1) In accordance with Rule 5 (MSLB), (1) will be used for RCS temperature control after 1212.
- 2) In accordance with Rule 6 (HPI), throttling of HPI (2) allowed at 1220.

Which ONE of the following completes the statements above?

- A.
    1. Tc
    2. is
  - B.
    1. Tc
    2. is NOT
  - C.
    1. CETCs
    2. is
  - D.
    1. CETCs
    2. is NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 39**  
(1 point)

---

Given the following Unit 1 Conditions:

Time = 0500:

- Reactor power = 25%
- 1A and 1C RBCUs operating in HIGH speed
- 1B RBCU is operable and OFF

Time = 0501:

- A LOCA occurs
- ES channels 1-5 actuate
- A LOOP occurs

Time = 0505:

- Offsite power is restored to Unit 1

Which ONE of the following describes RBCU status at time 0506?

1C RBCU is \_\_ (1) \_\_ and 1B RBCU is \_\_ (2) \_\_.

- A.     1. operating in LOW speed  
          2. operating in LOW speed
  - B.     1. operating in LOW speed  
          2. OFF
  - C.     1. OFF  
          2. operating in LOW speed
  - D.     1. OFF  
          2. OFF
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 40**  
(1 point)

---

Given the following Unit 1 conditions:

- The Reactor trips from 100% power due to a LBLOCA.

Which ONE of the following completes the statement:

    (1)     is added to the RB Emergency Sump to allow RBS to     (2)    .

- A.
    - 1. LiOH (Lithium Hydroxide)
    - 2. minimize hydrogen production from the boric acid reaction with Zircoloy
  - B.
    - 1. LiOH (Lithium Hydroxide)
    - 2. aid in keeping Iodine in solution, ultimately reducing offsite dose
  - C.
    - 1. TSP (Trisodium Phosphate Dodecahydrate)
    - 2. minimize hydrogen production from the boric acid reaction with Zircoloy
  - D.
    - 1. TSP (Trisodium Phosphate Dodecahydrate)
    - 2. aid in keeping Iodine in solution, ultimately reducing offsite dose
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 41**  
(1 point)

---

Given the following Unit 1 conditions:

- Time = 0400
- A LOCA has occurred
- Reactor Building pressure is 7.1 psig and increasing
- 1SA-1/C11 (ES 7 TRIP) is alarming
- 1SA-1/D11 (ES 8 TRIP) is NOT alarming

At 0400:

- 1) The status of 1SA-1/C11   (1)   correct.
- 2) 1BS-2   (2)   be OPEN.

Which ONE of the following completes the statements above?

- A.
    1. is
    2. will
  - B.
    1. is
    2. will NOT
  - C.
    1. is NOT
    2. will
  - D.
    1. is NOT
    2. will NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 42**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 22%
- The Turbine is online.
- OP/1/A/1106/014, Enclosure 4.2, Startup of Moisture Separator Reheaters (Turbine Online) is in progress
- 1HD-92/1HD-645 Moore Controller and 1HD-95/1HD-647 Moore Controller are in AUTOMATIC
- 1HD-92 and 1HD-95 are OPEN

Current conditions:

- 1HD-92/1HD-645 and 1HD-95/1HD-647 Moore controllers have experienced a loss of power
  - The upstream side of 1HD-92 and 1HD-95 is 5°F warmer than the downstream side
- 1) When power is restored to 1HD-92 & 1HD-645 and 1HD-95/1HD-647, with NO additional operator actions, 1HD-92 and 1HD-95 (SSRH Tank Level Control) will be operating in (1).
- 2) With NO additional operator actions, a water hammer event (2) likely to occur.

Which ONE of the following completes the above statements?

- A.     1. automatic  
       2. is NOT
  - B.     1. automatic  
       2. Is
  - C.     1. manual  
       2. is NOT
  - D.     1. manual  
       2. Is
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 43**  
(1 point)

---

Unit 1 initial conditions:

- Reactor power = 50%
- 1A and 1B SG levels ~ 30% Operating Range

Current conditions:

- 1A1 and 1B1 RCP's trip

Based on the above conditions, with NO operator actions, which ONE of the following states where SG levels will be controlled?

- A. 240 inches on the Extended Startup Range.
  - B. 30 inches on the Extended Startup Range.
  - C. 25 inches on the Startup Range.
  - D. 50% on the Operating Range.
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 44**  
(1 point)

---

Given the following Unit 1 conditions:

- A Reactor trip has occurred.
- Main Feedwater, Condensate Booster Pumps and Emergency Feedwater are unavailable.
- Rule 3 is initiated.
- Rule 4 is in progress, but HPI cooling is inadequate.
- The crew is performing actions in the LOHT tab.
- A SSF Event is NOT in progress.
- All SCM > 0F.

- 1) In accordance with the LOHT tab, the preferred method of feeding the SGs is via (1).
- 2) After heat transfer is established, the maximum flow rate is (2) in accordance with Rule 7.

Which ONE of the following completes the statements above?

- A. 1. SSF-ASW  
2. 400 gpm
  - B. 1. SSF-ASW  
2. 500 gpm
  - C. 1. Station ASW  
2. 400 gpm
  - D. 1. Station ASW  
2. 500 gpm
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 45**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 50%.
- Loss of main feedwater.

Current conditions:

- RCS temperature 546 °F decreasing.
- PZR Level 45" decreasing.
- RCS pressure 2015 psig decreasing.
- A SG pressures = 995 psig decreasing.
- B SG pressures = 1010 psig stable.

Which ONE of the following correctly completes the statements below:

- 1) Assuming no operator actions, the malfunction that would result in the above conditions is \_\_\_\_ (2) \_\_\_\_, and
- 2) In accordance with the EHT tab of EP/1/A/1800/001, \_\_\_\_ (2) \_\_\_\_ SG/SGs is/are required to be isolated.

- A.     1. the CSAE steam supply relief valve failing OPEN  
       2. both
- B.     1. the CSAE steam supply relief valve failing OPEN  
       2. a single
- C.     1. 1FDW-315 failing OPEN  
       2. Both
- D.     1. 1FDW-315 failing OPEN  
       2. a single
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 46**  
(1 point)

---

Given the following plant conditions:

- ACB-2 (Keowee 2 Generator BKR) CLOSED
- ACB-3 (Keowee 1 Emergency Feeder BKR) CLOSED

A LOOP (Switchyard Isolation) causes ALL 4160 V switchgear (1TC, 1TD, and 1TE) to de-energize.

Which ONE of the following describes the response of Keowee switchgear power supplies?

- A. 1X switchgear de-energizes and then is restored 15 seconds later
  - B. 2X switchgear de-energizes and then is restored 36 seconds later
  - C. 1X switchgear de-energizes and MUST be restored manually
  - D. 2X switchgear de-energizes and MUST be restored manually
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 47**  
(1 point)

---

The Operators have been directed to synchronize KHU-2 to the grid in accordance with OP/0/A/1106/019, Keowee Hydro at Oconee.

The operators note the following indications:

- Grid Frequency is 60.1 Hz
- Keowee Frequency is 59.7 Hz
- Keowee Line Voltage is 13.9 KV
- Keowee 2 Output Voltage is 15.0 kV

- 1) What direction is the synchroscope turning for the noted conditions 1?
  - 2) Raising on the UNIT 2 AUTO VOLTAGE ADJUSTER will cause the 2 voltage to rise.
- A.
    1. Clockwise.
    2. KEOWEE 2 LINE VOLTS
  - B.
    1. Clockwise.
    2. KEOWEE 2 OUTPUT VOLTS
  - C.
    1. Counterclockwise.
    2. KEOWEE 2 LINE VOLTS
  - D.
    1. Counterclockwise.
    2. KEOWEE 2 OUTPUT VOLTS
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 48**  
(1 point)

---

Given the following plant conditions:

- 1CA Battery charger fails - voltage output 0 vdc
- 1CA Battery voltage - 125vdc
- 1DCB Bus voltage - 127vdc
- Unit 2 DC Bus voltage - 123vdc
- Unit 3 DC Bus voltage - 126vdc

Which ONE of the following will supply power to 1DIA panelboard?

- A. 1CA battery
  - B. Unit 3 DC bus
  - C. 1DCB bus
  - D. Unit 2 DC bus
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 49**  
(1 point)

---

Given the following plant conditions:

- All three units at 50% power
- 1TC is de-energized
- KHU-1 is not running
- KHU-1 is aligned to the underground

At 1245:

- PCB 8 and 9 trip open and lock out
- ES channel 1 and 2 Keowee Emergency Start Signal has been received

With no operator action, which one of the following correctly describes the status of KHU-1 at 1250?

- A. KHU-1 is operating. KHU-1 control power is supplied by Battery #1
  - B. KHU-1 is operating. KHU-1 control power is supplied by Battery Charger #1 energized via KHU-1
  - C. KHU-1 is NOT operating. KHU-1 control power is not available due to 1TC being deenergized
  - D. KHU-1 is NOT operating. KHU-1 control power is not available due to PCB 8 and 9 being open
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 50**  
(1 point)

---

An Operator has just completed adjusting the setpoints on 1RIA-57, High Range Containment Monitor, in accordance with PT/0/A/0230/001, Radiation Monitor Check.

Which ONE of the following is an indication of a satisfactory source check?

- A. Alert Alarm Actuation ONLY
  - B. Alert AND High Alarm Actuation
  - C. Area Monitor Fault Alarm Actuation
  - D. Indication remains at .75 R/HR with no alarms
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 51**

(1 point)

---

Given the following Unit 3 conditions:

Initial conditions:

- Reactor Power = 100%
- 3A LPSW Pump operating
- LPSW Line leak occurs

Current conditions:

- Unit 3 LPSW Pressure = 60 psig, decreasing slowly
- Operating LPSW pump(s) amps slowly increasing

Which ONE of the following describes the status of the Unit 3 LPSW Pumps and an appropriate action per AP/3/A/1700/024, Loss of LPSW?

- A. ONLY 3A LPSW pump is running; secure operating LPSW pump.
  - B. ONLY 3A LPSW pump is running; reduce LPSW loads as needed.
  - C. BOTH 3A and 3B LPSW pumps are running; reduce LPSW loads as needed.
  - D. BOTH 3A and 3B LPSW pumps are running; secure operating LPSW pumps.
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 52**

(1 point)

---

Given the following plant conditions:

- ALL off-site power sources have been lost (230KV and 525KV transmission lines)
- Keowee has energized the MFB via the underground power path
- IA pressure = 85 psig and decreasing
- ALL Diesel air compressors are OFF
- No operator actions have been taken

Which ONE of the following describes IA compressors that will be operating?

- A. ONLY the Back-up Instrument Air Compressors will be operating
  - B. ONLY the Auxiliary Instrument Air Compressors will be operating
  - C. ALL Auxiliary Instrument Air Compressors and ALL Back-up Instrument Air Compressors will be operating
  - D. ALL Auxiliary Instrument Air Compressors and the Primary Instrument Air Compressor will be operating
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 53**

(1 point)

---

Given the following Unit 1 conditions:

- Reactor power = 100%
- A complete loss of Instrument Air (IA) and Auxiliary Instrument Air (AIA) occurs.

Which ONE of the following describes RCP seal cooling and Pressurizer level response?

RCP Seal cooling will be maintained by (1) and pressurizer level will (2).

### **ASSUME NO OPERATOR ACTIONS**

- A.     1. Component Cooling  
       2. decrease
  - B.     1. Component Cooling  
       2. increase
  - C.     1. HPI Seal Injection  
       2. decrease
  - D.     1. HPI Seal Injection  
       2. increase
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 54**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor Power = 100%
- Reactor Building average temperature = 120°F stable
- RBCUs 1A, 1B, & 1C running in High Speed

Current conditions:

- Inadvertent ES Channel 5 actuation

Based on these conditions, which ONE of the following describes the response of RB Pressure and the RB high pressure limit per TS 3.6.4, Containment Pressure?

1) With NO operator action, RB Pressure will (1).

2) The RB high pressure TS Limit is (2).

- A.     1. slowly increase  
          2.  $\leq 1.2$  psig
  - B.     1. slowly increase  
          2.  $\leq 2.45$  psig
  - C.     1. remain the same  
          2.  $\leq 1.2$  psig
  - D.     1. remain the same  
          2.  $\leq 2.45$  psig
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 55**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- LOCA occurs
- RB Pressure = 4.5 psig increasing
- RCS Pressure = 1500 psig decreasing

Current conditions:

- Time = 0500
- RB Pressure = 2.5 psig stable
- RCS Pressure = 1800 psig stable
- ES reset is desired

- 1) Depress RESET for ES Channels   (1)   to allow the HPI pumps ES logic to be reset.
- 2) At 0500, the Diverse HPI "Bistable Tripped" light   (2)   be illuminated.

Which ONE of the following completes the statements above?

- A.
    1. 1 and 2
    2. will
  - B.
    1. 1 and 2
    2. will NOT
  - C.
    1. 3 and 4
    2. will
  - D.
    1. 3 and 4
    2. will NOT
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 56**

(1 point)

---

Which one of the following conditions would result in a Control Rod Out Inhibit?

- A. Count rate = 675 cps increasing and Wide range NI-1 startup rate = 1.8 dpm
  - B. Count rate = 675 cps increasing and Source range NI-1 startup rate = 1.1 dpm
  - C. Reactor Power = 62% and Control Rod Group 1 loses its Group Out Limit
  - D. Reactor Power = 58% and Group 6 Rod 5 becomes misaligned by > 9 inches
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 57**  
(1 point)

---

Unit 1 was operating at 100% power when the following trends were observed:

- RCS pressure began to lower
- Pressurizer level began to rise
- Subcooling Margin (SCM) began to lower
- Quench tank level began to rise
- Quench tank pressure began to rise

Which one of the following correctly describes the initial effect on containment when these trends are observed?

- A. Containment pressure rises. Containment radiation levels increase.
  - B. Containment pressure rises. Containment radiation levels remain constant.
  - C. Containment pressure remains constant. Containment radiation levels increase.
  - D. Containment pressure remains constant. Containment radiation levels remain constant.
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 58**

(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 90% stable
- Control Rod Group 8 = 35% withdrawn
- Reactor Engineering has requested that Group 8 be withdrawn an additional 5%

Current conditions:

- OP/1/A/1105/019 (Control Rod Drive System) Enclosure 4.2 (Operation of APSRs) in progress
  - Diamond remains in AUTO during Group 8 movement
- 1) Prior to Group 8 movement the SEQ OR switch   (1)   be placed in the ON position.
  - 2) During Group 8 withdrawal the CRD TRAVEL lights on the Diamond   (2)   indicate Group 8 movement.

Which ONE of the following completes the statements above?

- A.    1. will  
      2. will
  - B.    1. will  
      2. will NOT
  - C.    1. will NOT  
      2. will
  - D.    1. will NOT  
      2. will NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 59**

(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- OAC Computer is out of service

Current conditions:

- Power Range channel 1NI-5 begins to drift low and is removed from service for calibration.

Which ONE of the following describes the instrumentation used to determine quadrant power tilt in accordance with OP/1/A/1105/014, Control Room Instrumentation Operation and Information?

- A. The three operable NI channels
  - B. Incore Detectors
  - C. Backup Incore Detectors
  - D. Quadrant power tilt cannot be determined
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 60**

(1 point)

---

Given the following Unit 1 conditions:

- Reactor power = 100%, steady state.
- The Operator Aid Computer (OAC) Subcooling Margin (SCM) program indicates that 1 of the 47 Core Exit Thermocouples (CETCs) is reading 65°F higher than any of the others.

1) The input from this CETC to the OAC SCM program is (1).

2) The computer calculated SCM will be (2).

Which ONE of the following completes the statements above?

- A.     1. valid  
          2. higher
  - B.     1. valid  
          2. unaffected
  - C.     1. not valid  
          2. higher
  - D.     1. not valid  
          2. unaffected
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 61**  
(1 point)

---

Unit 1 is in Mode 5 with Reactor Building Main Purge in operation.

Which ONE of the following will cause the RB Main Purge Fan to trip?

- A. Suction pressure = 5 inches of water vacuum
  - B. 1RIA-45, UNIT VENT GAS NORM, reaches its ALERT setpoint
  - C. Statalarm 1SA9/B-3, RBV PURGE INLET TEMPERATURE LOW, alarms
  - D. 1PR-3 (RB PURGE CONTROL) green CLOSED light is lit and red OPEN light is off on 1VB2
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 62**  
(1 point)

---

Unit 1 is in a refueling outage with the following conditions:

- The reactor has been refueled
- It is desired to drain the Fuel Transfer Canal with ONLY a SF Cooling Pump and NOT use LPI Pump(s)
- LPI is in service providing decay heat removal
- OP/1/A/1102/015, Filling and Draining FTC, is in progress to drain the Fuel Transfer Canal in preparation for setting the Reactor Head onto the Vessel
- OP/1/A/1102/015 Enclosure 4.9, Draining FTC, has just been entered

- 1) Enclosure 4.9 will align the (1) SF Cooling Pump to take suction from the FTC deep end and discharge to the U1 BWST.
- 2) If FTC level is lowered too far, damage to the (2) could occur.

Which ONE of the following completes the statements above?

- A.
    1. 1B
    2. aligned SF cooling pump
  - B.
    1. 1B
    2. operating LPI pump(s)
  - C.
    1. 1C
    2. aligned SF cooling pump
  - D.
    1. 1C
    2. operating LPI pump(s)
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 63**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor tripped earlier this shift and is in Mode 3
- Cooling down on the Turbine Bypass Valves with the controller's in HAND

Current conditions:

- Statalarm 1SA-02 B-12, "ICS HAND POWER FAILURE" annunciates.
- 1) An operator dispatched per AP/023, Loss of ICS Power, reports that (1) on the Static Inverter Bypass Switch panel is NOT its normal position, and painters are in the area.
  - 2) With these conditions, the Turbine Bypass Valves are operable in (2).

Which ONE of the following completes the statements above?

- A.
    1. SW #2
    2. AUTO only
  - B.
    1. SW #3
    2. AUTO only
  - C.
    1. SW #2
    2. AUTO or HAND
  - D.
    1. SW #3
    2. AUTO or HAND
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 64**

(1 point)

---

Unit 1 plant conditions:

- Reactor power = 100%
- 50 gpd tube leak 1A Steam Generator for approximately 1 week
- An increase in activity is reported in Chemical Treatment Pond (CTP) #3

Which ONE of the following describes an event which would cause this increase and the action(s) required to mitigate this event?

- A. 1RIA-31 (LPI Cooler) activity is increasing and this will increase activity levels in CTP #3.  
Isolate and repair the faulty cooler.
  - B. 1RIA-33 (LW Release) interlock has failed and a Waste Monitor Tank release continues from the Radwaste Building.  
Stop the Waste Monitor Tank release.
  - C. 1RIA-42 (RCW) activity is increasing and this will increase activity levels in CTP #3.  
Isolate and repair the faulty cooler.
  - D. 1RIA-54 (TBS) interlock has failed and the Turbine Building Sump is being continually pumped.  
Open and White Tag 1A and 1B TBS Pump breakers.
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 65**  
(1 point)

---

Given the following plant conditions:

- ALL three (3) Oconee units at 100% power
- The OSM has receive notification of Condition A for the Intake Canal
- AP/13 (Dam Failure) has been entered
- CCW-8 (Emergency CCW Discharge) To Tailrace, has been CLOSED

1) CCW-8 should be de-energized by opening its supply breaker within (1).

2) This is done to ensure it (2).

Which ONE of the following completes the above statements?

- A.
    - 1. 1 hour
    - 2. will not open if submerged
  - B.
    - 1. 4 hours
    - 2. will not open if submerged
  - C.
    - 1. 1 hour
    - 2. is safe to manually operate in subsequent steps
  - D.
    - 1. 4 hours
    - 2. is safe to manually operate in subsequent steps
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 66**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%

Current conditions:

- Blackout in progress
- An RO has initiated AP/25 (SSF EOP)
- Breaker transfer in the SSF is complete

1) The SSF RO will initiate feed with the   (1)  .

2) If required, 1RC-4 will be closed by   (2)  .

Which ONE of the following completes the statements above?

- A.    1. SSF RC Makeup pump ONLY  
      2. using the switch in the Unit 1 control room
  
  - B.    1. SSF RC Makeup pump ONLY  
      2. directing the RO in the SSF control room
  
  - C.    1. SSF RC Makeup pump and SSF Aux Service Water pump  
      2. using the switch in the Unit 1 control room
  
  - D.    1. SSF RC Makeup pump and SSF Aux Service Water pump  
      2. directing the RO in the SSF control room
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 67**  
(1 point)

---

A normal plant startup is in progress with the following operations scheduled to occur:

- 0800 the Turning Gear Oil Pump (TGOP) is started
- 0900 an HPI Pump is started in the process of swapping operating pumps.

In accordance with OMP 1-02, RULES OF PRACTICE:

- 1) (1) is the earliest time that an announcement is made for starting the above pumps.
- 2) If a safety barrier is in place, confirmation that there are no personnel in the immediate vicinity of the 4160 volt breaker (2) required.

Which ONE of the following completes the statements above?

- A.
    1. 0759
    2. is
  - B.
    1. 0759
    2. is NOT
  - C.
    1. 0859
    2. is
  - D.
    1. 0859
    2. is NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 68**

(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- LDST level = 75" stable
- Group 7 rod position = 94% withdrawn
- Makeup to LDST initiated from 1A BHUT
- Neutron error = 0 stable

Current conditions:

- 1HP-15 Bailey controller indicates 470 gallons added to LDST
- 1A Bleed Transfer Pump secured

Which ONE of the following would describe a diverse indication that 470 gallons of 1A BHUT had been added to the LDST?

LDST level is approximately \_\_\_\_ (1) \_\_\_\_ inches and neutron error will become \_\_\_\_ (2) \_\_\_\_.

- A.     1. 90  
          2. positive
  - B.     1. 90  
          2. negative
  - C.     1. 95  
          2. positive
  - D.     1. 95  
          2. negative
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 69**  
(1 point)

---

Given the following Unit 1 conditions:

- Unit startup in progress
- Turbine Generator startup is in progress using OP/1/A/1106/001 TURBINE GENERATOR, Enclosure 4.1 TURBINE GENERATOR STARTUP

- 1) Selecting the "Turbine Load" pushbutton sends a signal to \_\_\_\_ (1) \_\_\_\_.
- 2) This evolution is performed \_\_\_\_ (2) \_\_\_\_.

Which ONE of the following completes the statements above?

- A.
    1. close the Turbine Bypass Valves which in turn, causes the Turbine Control Valves to open to maintain steam pressure constant
    2. prior to paralleling to the grid
  - B.
    1. close the Turbine Bypass Valves which in turn, causes the Turbine Control Valves to open to maintain steam pressure constant
    2. after paralleling to the grid
  - C.
    1. open the Turbine Control Valves which in turn, causes the Turbine Bypass Valves to close to maintain steam pressure constant
    2. prior to paralleling to the grid
  - D.
    1. open the Turbine Control Valves which in turn, causes the Turbine Bypass Valves to close to maintain steam pressure constant
    2. after paralleling to the grid
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 70**

(1 point)

---

Given the following Unit 2 conditions:

- Reactor startup in progress
- Control Rod Groups 1-4 are fully withdrawn
- Control Rod Group 5 is 5% withdrawn
- A group 2 safety rod drops fully into the core and cannot be moved
- SDM has been determined NOT to be within the limit specified in the COLR

Based on the above conditions:

- 1) Is entry into TS 3.1.5, SAFETY ROD POSITION LIMITS, required?
  - 2) What is the maximum time allowed to initiate boration to restore SDM to within the limit stated in the COLR?
- A.     1. yes  
       2. 1 hour
- B.     1. yes  
       2. 15 minutes
- C.     1. no  
       2. 1 hour
- D.     1. no  
       2. 15 minutes
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 71  
(1 point)

---

Unit 1 plant conditions:

- Reactor power = 100%

Based on the above condition, which ONE of the following describes a condition that would require entry into a Tech Spec ACTIONS table?

- A. UST level = 6.5 feet
  - B. BWST level = 47.3 feet
  - C. CFT <sup>800</sup> pressure = 630 psig  
<sub>1A</sub>
  - D. BWST temperature = 101.5 F
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 72  
(1 point)

---

Which ONE of the following describes the operation of the Unit Vent Radiation Monitors RIA-45 and RIA-46 when the switchover acceptance range setpoint is reached?

RIA-45 will read \_\_\_\_ (1) \_\_\_\_ and RIA-46 will provide \_\_\_\_ (2) \_\_\_\_.

- A.
    - 1. offscale high
    - 2. only alarm and unit vent radiation level indication
  - B.
    - 1. offscale high
    - 2. the same interlock functions that RIA-45 performs)
  - C.
    - 1. ZERO
    - 2. only alarm and unit vent radiation level indication
  - D.
    - 1. ZERO
    - 2. the same interlock functions that RIA-45 performs
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 73  
(1 point)

---

Given the following Unit 3 conditions:

- 3A GWD gas tank release in progress
- Release is at 2/3 Station Limit

1) 1RIA-45 High and Alert setpoints will be set at \_\_ (1) \_\_ the normal 1/3 Station Limit as listed in PT/0/A/230/001 (Radiation Monitor Check).

2) If 1RIA-45 High alarm setpoint is reached, the 3A GWD gas tank release \_\_ (2) \_\_.

Which ONE of the following completes the statements above?

- A.     1. double  
          2. will automatically terminate
  - B.     1. double  
          2. must be manually terminated
  - C.     1. half  
          2. will automatically terminate
  - D.     1. half  
          2. must be manually terminated
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 74**  
(1 point)

---

Given the following Unit 3 conditions:

Initial conditions:

- Reactor power = 100%

Current conditions:

- Chlorine gas is entering the Control Room due to an accidentally dropped cylinder.
- The CRS has implemented AP/3/A/1700/008 (Loss of Control Room).

1) The RO will go to the (1)

2) Bank 2 Groups (2) Pzr heaters will be used to control RCS pressure from this location.

Which ONE of the following completes the statements above?

- A.     1. Standby Shutdown Facility  
          2. B and D
  - B.     1. Standby Shutdown Facility  
          2. B and C
  - C.     1. Unit 3 Auxiliary Shutdown Panel  
          2. B and D
  - D.     1. Unit 3 Auxiliary Shutdown Panel  
          2. B and C
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 75**  
(1 point)

---

Unit 3 initial conditions:

- Reactor power = 100%
- LPSW Pump Auto Start Circuitry is enabled

Time = 0400:

- A rupture in the Unit 3 LPSW discharge header occurs.

Time = 0402:

- LPSW header pressure has decreased to 20 psig with the following alarms actuated:
  - 3SA-9/B-9 LPSW RBCU A Cooler Rupture
  - 3SA-9/C-9 LPSW RBCU B Cooler Rupture
  - 3SA-9/D-9 LPSW RBCU C Cooler Rupture
  - 3SA-9/A-9 LPSW Header A/B Pressure Low
  - OAC computer point D2100, RCP MTR CLR INL HDR FLOW LO/NORMAL

- 1) RB Aux Coolers LPSW supply and return valves, 3LPSW-1054, 1055, 1061, and 1062, are \_\_\_\_ (1) \_\_\_\_.
- 2) The LPSW 3A and 3B Hdr From RX BLDG Auto Isolation valves, 3LPSW-1121, 1122, 1123, and 1124, are \_\_\_\_ (2) \_\_\_\_.

Assuming no manual operator actions, which ONE of the following completes the statements above?

- A.     1. open  
          2. open
  - B.     1. open  
          2. closed
  - C.     1. closed  
          2. open
  - D.     1. closed  
          2. closed
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 76

(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%

Current conditions:

- Both Main Feedwater Pumps Tripped
- Reactor power = 60% and slowly decreasing

1) In accordance with B&W analysis, a MINIMUM of (1) gallons per minute of Emergency Feedwater flow is required to limit the RCS pressure increase to below the design standard.

2) The EOP (2) direct tripping the Main Turbine at this time.

Which ONE of the following completes the statements above?

- A.     1. 375  
       2. will
  - B.     1. 375  
       2. will NOT
  - C.     1. 750  
       2. will
  - D.     1. 750  
       2. will NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 77**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Time = 0045
- Core Thermal Power = 100%

Current conditions:

- LOCA occurred at time = 0100
- EOP LOCA Cooldown Tab in progress
- LPI FLOW TRAIN A = 1200 gpm
- LPI FLOW TRAIN B = 1100 gpm
- Core SCM = 0° F

Which ONE of the following completes the statement listed below?

Per Oconee accident analysis, the Post LOCA Boron Dilute flow path must be placed in service no later than   (1)   for   (2)  .

- A.     1. 1000  
       2. Boron dilution
  - B.     1. 1000  
       2. increased heat removal
  - C.     1. 1600  
       2. Boron dilution
  - D.     1. 1600  
       2. increased heat removal
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 78  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor has been tripped
- 1A S/G has experienced a SGTR
- The EOP SGTR Tab is in progress
- 1B S/G is isolated due to a MSLB and cannot be steamed
- 1A S/G is being steamed to prevent overfill
- SCM is being minimized and = 10 degrees F

Current conditions:

- 1A S/G has reached the level where water can enter the main steam lines
- Rule 4 has been initiated and the PORV has been opened
- SCM = 0 degrees F

Which ONE of the following completes the statements listed below?

- 1) Based on the initial conditions, if Technical Specification cooldown rate limits are exceeded while steaming to prevent overfill, steaming of 1A S/G should be (1).
- 2) Based on the current conditions, the EOP (2) Tab should be initiated.

- A.
    1. continued
    2. LOSCM
  - B.
    1. continued
    2. HPI CD
  - C.
    1. discontinued
    2. LOSCM
  - D.
    1. discontinued
    2. HPI CD
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 79**

(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor tripped at 0600
- AFIS header B initiated
- 1A S/G pressure = 800 psig and slowly decreasing
- ES 1 & 2 actuated
- RB pressure = 2 psig and increasing
- Core SCM = 0° F
- Rule 2 (Loss of SCM) is in progress

Current conditions:

- Time = 0608
- Core SCM = 15° F
- Rule 5 is complete
- EHT Tab has been initiated
- Tcold = 460° F
- HPI has been throttled with 1HP-120 fully open and 1HP-26 throttled open to maintain PZR level steady >100"

At 0608, which ONE of the following completes the statements listed below?

1) Rule 8 (PTS) (1) required to be initiated.

2) In accordance with the EHT Tab, the (2) Tab will be initiated.

- A.     1. is  
          2. FCD
  - B.     1. is  
          2. LOCA CD
  - C.     1. is NOT  
          2. FCD
  - D.     1. is NOT  
          2. LOCA CD
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 80  
(1 point)

---

Given the following Unit 1 conditions:

Time = 0700

- Reactor Power = 100%
- 1SA-06 A-2 (INVERTER 1DIC SYSTEM TROUBLE) is in alarm
- 1SA-13 B-7 (INVERTER 1DIC OUTPUT VOLTAGE LOW) is in alarm

Time = 0800

- 1SA-13 D-7 (INVERTER 1DIC MANUAL BYPASS) is in alarm

Time = 0900

- 1DIC inverter has been repaired and is ready to be aligned to 1KVIC bus

At 0900:

1) 1KVIC Panelboard is \_\_\_\_ (1) \_\_\_\_.

2) The 1DIC Inverter is \_\_\_\_ (2) \_\_\_\_.

Which ONE of the following completes the statements above?

- A.    1. operable  
      2. operable
  - B.    1. operable  
      2. inoperable
  - C.    1. inoperable  
      2. operable
  - D.    1. inoperable  
      2. inoperable
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 81  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- Normal LPSW system alignment
- "B" SSW Header is inoperable
- Units 2 and 3 are in MODE 1
- 1SA-9 A-9 (LPSW Header A Pressure Low) is in alarm
- B LPSW Pump amps are erratic
- LPSW Header pressure is fluctuating

Current conditions:

- AP/1/A/1700/024 (Loss of LPSW) has been initiated
- Unit 1/2 LPSW Pump Auto Start Circuit has been placed in DISABLE
- B LPSW Pump has been stopped
- C LPSW Pump has been started

Which ONE of the following completes the statements listed below?

- 1) Per the TS 3.3.28 (Low Pressure Service Water (LPSW) Standby Pump Auto-Start Circuitry) bases, the LPSW Pump Auto-Start Circuitry is required to be operable on (1) LPSW pump(s) in order to ensure LPSW cooling water is available following a Loss Of Off-site Power.
- 2) Based on the current conditions, a TS 3.3.28 action statement should be entered on (2).

### REFERENCE PROVIDED

- A.
  1. all
  2. Units 1, 2 and 3
- B.
  1. all
  2. Unit 1 and 2 ONLY
- C.
  1. B only
  2. Units 1, 2 and 3
- D.
  1. B only
  2. Unit 1 and 2 ONLY

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 82**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Core Thermal Power = 100%
- ICS Reactor Bailey and Diamond are in Manual for maintenance

Current conditions:

- 1SA-02 B-10 (CRD Asymmetric Rod Alarm) is received
- Asymmetric Rod Fault (amber light on Diamond) is illuminated
- Group 4 Rod 2 dropped to 93% API
- AP/1/A/1700/001 (Unit Runback) has been initiated
- Recovery of Group 4 Rod 2 is desired at this time

Based on the current conditions, which ONE of the following completes the statements listed below?

- 1) OP/1/A/1105/019 (Control Rod Drive System) Enclosure   (1)   should be selected to restore Group 4 Rod 2 to its group average rod height.
  - 2) In accordance with the enclosure selected above,   (2)   must be selected on the Diamond panel prior to positioning regulating rods to stop a rise in Reactor power or Tave when restoring Group 4 Rod 2 to its group average rod height.
- A.     1. 4.9 (Realignment Of Safety Rod, Regulating Rod, Or APSR)  
       2. SEQUENCE
- B.     1. 4.6 (Recovery of Dropped/Misaligned Safety or Regulating Control Rods with Diamond in Manual)  
       2. SEQUENCE
- C.     1. 4.9 (Realignment Of Safety Rod, Regulating Rod, Or APSR)  
       2. SEQUENCE OVERRIDE
- D.     1. 4.6 (Recovery of Dropped/Misaligned Safety or Regulating Control Rods with Diamond in Manual)  
       2. SEQUENCE OVERRIDE
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 83**

(1 point)

---

Given the following Unit 1 conditions:

Date/Time = 5-5 / 0000

- Reactor power = 96% with power increase in progress
- 1SA-02 B-10 (CRD Asymmetric Rod Alarm) is received
- Asymmetric Rod Fault (amber light on Diamond) is illuminated
- Group 7 Rod 3 has dropped fully into the core
- AP/1/A/1700/001 (Unit Runback) has been initiated

Date/Time = 5-5 / 1200

- Recovery of Group 7 Rod 3 in progress

Which ONE of the following completes the statements listed below?

- 1) Use of Jog Speed may cause damage to the (1).
  - 2) In accordance with OP/1/A/1105/019 (Control Rod Drive System), the rod will be withdrawn continuously in (2).
- A.
    1. CRDM Motor
    2. JOG speed
  - B.
    1. Spider Assembly
    2. JOG speed
  - C.
    1. CRDM Motor
    2. RUN speed
  - D.
    1. Spider Assembly
    2. RUN speed
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 84**  
(1 point)

---

Give the following Unit 3 conditions:

Initial conditions:

- Reactor power = 100%
- Fuel movement in Unit 3 Spent Fuel Pool

Current conditions:

- Unit 3 Spent Fuel Pool is damaged
- Estimated rate of SFP inventory loss is 600 gpm
- AP/3/1700/035 (Loss of SFP Cooling and/or Level) in progress

- 1) In accordance with AP/35, the use of lake water   (1)   required to mitigate this event.
- 2) When required and in accordance with AP/35, lake water must be applied to the SFP within a MAXIMUM of   (2)   hours.

Which ONE of the following completes the statements above?

- A.
    1. is
    2. two
  - B.
    1. is
    2. four
  - C.
    1. is NOT
    2. two
  - D.
    1. is NOT
    2. four
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 85**  
(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Time = 0800:00
- Reactor power = 100%
- ACB-3 is closed
- 230 KV Switchyard Red and Yellow Bus voltage = 226.248 KV

Current conditions:

- Time = 0800:10
- SA-16 C-1 (230 KV Switchyard Isolate ES Permit) alarm is received
- SA-15 C-1 (Channel 1 Undervoltage)
- SA-15 C-3 (Channel 2 Undervoltage)
- ES-1 and ES-2 actuate due to a LOCA

Which ONE of the following completes the statements listed below?

- 1) Unit 1 Main Feeder Busses will be energized from (1).
  - 2) When required, recovery from Switchyard Isolation and shut down of the Keowee Hydro Units will be completed in accordance with (2).
- A.     1. KHU #1  
       2. EOP Enclosure 5.41 (ES Recovery)
- B.     1. KHU #1  
       2. AP/1/A/1700/011 (Recovery from Loss of Power)
- C.     1. KHU #2  
       2. EOP Enclosure 5.41 (ES Recovery)
- D.     1. KHU #2  
       2. AP/1/A/1700/011 (Recovery from Loss of Power)
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 86**

(1 point)

---

Given the following Unit 3 conditions:

- Reactor power = 100%
- 3DIA supply breaker to CRD breaker shunt trip device in RPS channel "A" tripped OPEN

1) The 3A RPS channel is   (1)  .

2)   (2)   required to be performed.

Which ONE of the following completes the statements above

- A.     1. operable  
       2. TS 3.3.4 (Control Rod Drive Trip Devices) action statements are
  - B.     1. operable  
       2. TS 3.3.4 (Control Rod Drive Trip Devices) action statements are NOT
  - C.     1. NOT operable  
       2. TS 3.3.1 (RPS Instrumentation) action statements are
  - D.     1. NOT operable  
       2. TS 3.3.1 (RPS Instrumentation) action statements are NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 87**  
(1 point)

---

Given the following conditions on Unit 1:

Time = 1355

- Reactor power = 100%

Time = 1400

- RCS NR Press feeding ICS failed HIGH
- Feedwater flow increasing

Time = 1401

- 1SA-02 D-3 (RC PRESS HIGH/LOW) is in alarm
- 1SA-02 D-4 (RC PRESS EMERG LOW) is in alarm

Time = 1405

- Reactor is tripped
- 1RC-4 is closed
- 1RC-1 is closed
- 1RC-3 is closed

- 1) At time 1401, 1SA-02 D-4 (RC PRESS EMERG LOW) alarm is (1).
- 2) At time 1405, if the most limiting design basis RCS overpressure transient were to occur, the maximum RCS pressure (2) exceed the RCS pressure safety limit.

Which ONE of the following completes the statements above?

- A.
    1. valid
    2. will
  - B.
    1. valid
    2. will NOT
  - C.
    1. NOT valid
    2. will
  - D.
    1. NOT valid
    2. will NOT
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 88  
(1 point)

---

Given the following Unit 3 conditions:

Time = 1000

- Reactor power = 100%
- 3A RBS pump is out of service

Time = 1001

- Seismic event
- 3SA09/C9 (RBCU B Cooler Rupture) actuated
- 3B RBCU inlet flow 750 gpm
- 3B RBCU outlet flow 920 gpm
- 3TE de-energized

Time = 1014

- 3SA09/C9 required actions are complete

Time = 1015

- Damage from seismic event results in a design basis LOCA

- 1) At 1001, 3SA09/C9 (RBCU B Cooler Rupture) alarm is (1).
- 2) At 1015, the RBCUs and RBS systems (2) sufficient to limit containment temperature and pressure within design limits.

Which ONE of the following completes the statements above?

- A.
    1. valid
    2. are
  - B.
    1. valid
    2. are NOT
  - C.
    1. NOT valid
    2. are
  - D.
    1. NOT valid
    2. are NOT
-

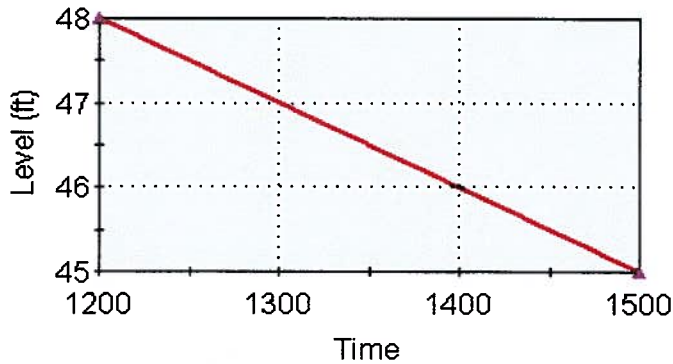
# Oconee Nuclear Station

## ILT43 ONS SRO NRC Examination

Question: 89  
(1 point)

Given the following Unit 1 conditions:

### BWST Level



- 1) An RO is performing PT1/A/600/001 (Periodic Instrument Surveillance) and is reviewing the chart of control room indicated BWST level above, the latest time that adequate NPSH for the LPI and RBS pumps after suction is swapped to the RBES is ensured is (1).
- 2) The MINIMUM (2) limits of the BWST ensure the solution in the RB Emergency sump following a LOCA is within a specified pH range.

Which ONE of the following completes the statements above?

- A.
  1. 1300
  2. Level
- B.
  1. 1300
  2. boron concentration
- C.
  1. 1400
  2. Level
- D.
  1. 1400
  2. boron concentration

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 90**

(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Rule 3 is in progress
- LOHT tab in progress
- NO SGs can be fed with FDW (Main/ CBP/Emergency)
- RCS pressure reached 2300 psig
- Rule 4 (Initiation of HPI Forced Cooling) is in progress
- SRO has transferred to HPI CD tab

Current conditions:

- 1A Main Feed Pump is available to feed SGs, ability to feed has been verified
- 1A1 RCP is in operation
- RCS Tcold = 525 degrees
- TBVs available

1) Initially feed 1A SGs at \_\_\_\_ (1) \_\_\_\_ x 10<sup>6</sup> lbm/hr until heat transfer is established.

2) The reason for the above limit is to prevent exceeding SG \_\_\_\_ (2) \_\_\_\_ stress limits.

Which ONE of the following completes the statement above?

- A.    1. 0.05  
      2. Tensile
  - B.    1. 0.05  
      2. Compressive
  - C.    1. 0.5  
      2. Tensile
  - D.    1. 0.5  
      2. compressive
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 91**

(1 point)

---

Given the following Unit 1 conditions:

Initial Conditions:

- Unit 1 has experienced a Small Break LOCA
- Loss of Subcooling Margin tab in progress
- Flow cannot be established in the B HPI header

Current conditions

- Feeding BOTH SGs at 300 gpm
- An unexpected spike in neutron flux occurs

1) The CRS will (1).

2) Feed flow to each SG is (2).

Which ONE of the following completes the statements above?

- A.
    - 1. direct performance of Rule 1 and transfer to the UNPP tab
    - 2. throttled as needed to control cooldown rate
  - B.
    - 1. continue in LOSCM tab
    - 2. increased to 1000 gpm per header to the LOSCM setpoint
  - C.
    - 1. direct performance of Rule 1 and transfer to the UNPP tab
    - 2. increased to 1000 gpm per header to the LOSCM setpoint
  - D.
    - 1. continue in the LOSCM tab
    - 2. throttled as needed to control cooldown rate
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 92  
(1 point)

---

Given the following Unit 3 conditions:

- Shutdown for refueling in progress
- Reactor in MODE 4
- Component Handling in progress in the Spent Fuel Pool
- A fuel assembly is currently in the mast and being moved
- 3RIA-6 (SFP Area Monitor) shows an observable increase, approximately one half ( $\frac{1}{2}$ ) decade above background
- 3SA-8/B-9 (RM Process Monitor Radiation High) in alarm due to 3RIA-32
- Spent Fuel Pool level = minus (-) 2.7 feet decreasing

Enter (1) to mitigate the event and the required Technical Specification entry and basis is (2).

Which ONE of the following completes the statement above?

- A.
    - 1. AP/35 (Loss of SFP Cooling and/or Level)
    - 2. TS 3.10.1 (SSF) - Ensures the RC Makeup pump can maintain all three Oconee Units in MODE 3 for a minimum of 72 hours
  - B.
    - 1. AP/35 (Loss of SFP Cooling and/or Level)
    - 2. TS 3.7.11 (Spent Fuel Pool Water Level) - Ensures adequate iodine removal during a fuel handling accident
  - C.
    - 1. AP/18 (Abnormal Release of Radioactivity)
    - 2. TS 3.10.1 (SSF) - Ensures the RC Makeup pump can maintain all three Oconee Units in MODE 3 for a minimum of 72 hours
  - D.
    - 1. AP/18 (Abnormal Release of Radioactivity)
    - 2. TS 3.7.11 (Spent Fuel Pool Water Level) - Ensures adequate iodine removal during a fuel handling accident
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 93

(1 point)

---

Given the following Unit 1 conditions:

Initial conditions:

- Unit 1 TDEFDW pump is out of service
- A lightning strike in the switchyard causes a reactor trip
- Incorrect wiring in 4160v relays cause a slow transfer of power to the startup transformer
- Rule 3 is in progress

Current conditions:

- Both MD EFDW pumps fail
- LOHT tab initiated
- ALL SCMs > 0°F

1) Condensate Booster Pump feed \_\_\_\_ (1) \_\_\_\_ be established.

2) RCS temperature subsequently increases and results in "A" core SCM = 0°F, the crew will \_\_\_\_ (2) \_\_\_\_ .

Which ONE of the following correctly completes the statements above?

- A.     1. will  
          2. transfer to the LOSCM tab
  - B.     1. will  
          2. remain in the LOHT tab
  - C.     1. will NOT  
          2. transfer to the LOSCM tab
  - D.     1. will NOT  
          2. remain in the LOHT tab
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 94**

(1 point)

---

Given the following Unit 3 conditions:

Initial conditions:

- Time = 0800
- Reactor in MODE 4
- OAC computer point O3A1850 Unit 3 Cable Rm temperature = 77° F
- OAC computer point O3A1851 Unit 3 Equip Rm temperature = 82° F

Current conditions:

- Time = 2000
- Reactor in MODE 4
- OAC computer point O3A1850 Unit 3 Cable Rm temperature = 81° F
- OAC computer point O3A1851 Unit 3 Equip Rm temperature = 84° F

- 1) TS 3.7.16, (Control Room Area Cooling System) limits (1) been exceeded,
- 2) SLC 16.8.1, (Control of Room Temperature for Station Blackout) limits (2) been exceeded.

Based on current plant conditions, which ONE of the following completes the statements above?

- A.
    1. have
    2. have
  - B.
    1. have NOT
    2. have
  - C.
    1. have
    2. have NOT
  - D.
    1. have NOT
    2. have NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 95**

(1 point)

---

Given the following Unit 2 conditions:

- Hydrogen has just been added to the Unit 2 LDST:

Time = 1000:

- Reactor power = 100%
- LDST level = 75 inches stable
- LDST pressure = 35 psig stable
- Actions are being taken to vent the LDST

Time = 1015:

- LDST venting complete
- LDST level = 74 inches
- LDST pressure = 12 psig stable

Time = 1030

- Reactor power = 97% decreasing

- 1) Based on the above level and pressure trend, at (1) the HPI system was inoperable.
- 2) At 1030 and in accordance with NSD 202 an Emergency Notification System (ENS) notification (2) required.

Which ONE of the following completes the statements above?

### **REFERENCE PROVIDED**

- A.
    1. 1000
    2. is
  - B.
    1. 1000
    2. is NOT
  - C.
    1. 1015
    2. is
  - D.
    1. 1015
    2. Is NOT
-



# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 96**  
(1 point)

---

Given the following Unit 2 conditions:

- Unit has been shutdown 16 hours for a scheduled refueling outage
- The Condensate system has just been secured (no outage maintenance is scheduled for this system)
- The Shift Manager is reviewing Engineering Change paperwork associated with a Major Design Change that will be installed during this outage

Which ONE of the following completes the statements below?

In accordance with OMP 1-02 (Rules of Practice) and NSD 301 (Engineering Change Program):

- 1) Temporary hoses and fittings attached to Condensate system drain valves to place the system in a dry lay-up condition \_\_\_\_ (1) \_\_\_\_ required to follow the temporary design change process.
  - 2) If a temporary design change is installed, \_\_\_\_ (2) \_\_\_\_ is required to maintain a log of the change.
- A.     1. are  
       2. engineering
- B.     1. are NOT  
       2. engineering
- C.     1. are  
       2. Operational Control Group
- D.     1. are NOT  
       2. Operational Control Group
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 97**  
(1 point)

---

Given the following Unit 1 conditions:

Date/Time = 5-10 / 0000

- A 12 hour surveillance is completed

Date/Time = 5-11 / 0000

- It is determined that the above 12 hour surveillance has not been performed

Assuming the surveillance is NOT performed, which ONE of the following describes the latest date and time that the LCO must be declared NOT met?

- A. 5-11 / 1200
  - B. 5-11 / 1600
  - C. 5-11 / 1800
  - D. 5-12 / 0000
-

# Oconee Nuclear Station

## ILT43 ONS SRO NRC Examination

Question: 98  
(1 point)

Initial conditions:

- A LOCA on Unit 2 has resulted in a declaration of General Emergency
- Emergency Worker Exposure Limits have been implemented

Current conditions:

- The below two tasks need to be performed
- Neither of the tasks are Planned Emergency Exposures

Activity:	Task 'A'	Task 'B'
	NOT Lifesaving, NOT protecting valuable property, NOT protection of large populations	Protecting Valuable Property
Round-trip		
Transit time:	23 min	19 min
Dose rate during		
Transit:	1.86E+02 mr/hr	2.47E+03 mr/hr
Time at work		
site (to do task):	16 min	13 min
Dose rate at		
work site:	3.39E+04 mr/hr	4.60E+04 mr/hr

Answer both parts of the question in accordance with the requirements of OMP 1-18, "Implementation Standard During Abnormal and Emergency Events," and RP/0/B/1000/002, "Control Room Emergency Coordinator Procedure." Calculate all quantities to two decimal places.

Based on the current conditions, which ONE of the following correctly completes the below statements?

1) The Emergency Coordinator (1) authorize Task 'A' IN WRITING.

2) The Emergency Coordinator (2) VERBALLY authorize Task 'B'.

- A.     1. can  
       2. can
- B.     1. can NOT  
       2. can
- C.     1. can  
       2. can NOT
- D.     1. can NOT  
       2. can NOT

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

Question: 99  
(1 point)

---

Initial conditions:

- The shift fire brigade received an overall “unsatisfactory” grade during an unannounced drill (not involving offsite fire response assistance) during an otherwise uneventful nightshift of Sunday, May 5, 2013.

Current conditions:

Time = 1800 on Thursday, May 9, 2013

- The same fire brigade members and Fire Brigade Leader (FBL) report for duty.
- No remedial fire brigade training has occurred. The fire brigade has **NOT** been given a remedial/repeat drill.

Time = 0700 on Friday, May 10, 2013

- The OSM has determined that seven qualified Fire Brigade members are onsite.

Based on the current conditions, which ONE of the following completes the below statements?

- 1) In accordance with NSD 112, “Fire Brigade Organization, Training, and Responsibilities,” the above shift fire brigade (1) qualified to assume fire brigade duties for the May 9 shift.
  - 2) In accordance with NSD 112, the MINIMUM number of Fire Brigade members on dayshift for May 10 (2) met for Oconee.
- A.     1. is  
          2. is
- B.     1. is  
          2. is NOT
- C.     1. is NOT  
          2. is
- D.     1. is NOT  
          2. is NOT
-

# Oconee Nuclear Station

## *ILT43 ONS SRO NRC Examination*

**Question: 100**  
(1 point)

---

Given the following plant conditions:

Initial conditions:

- Unit 1 and unit 2 were operating at 100% power
- Unit 3 had just completed off-loading the core to the Spent Fuel Pool
- A complete Station Blackout/Loss of All AC Power occurs to all units

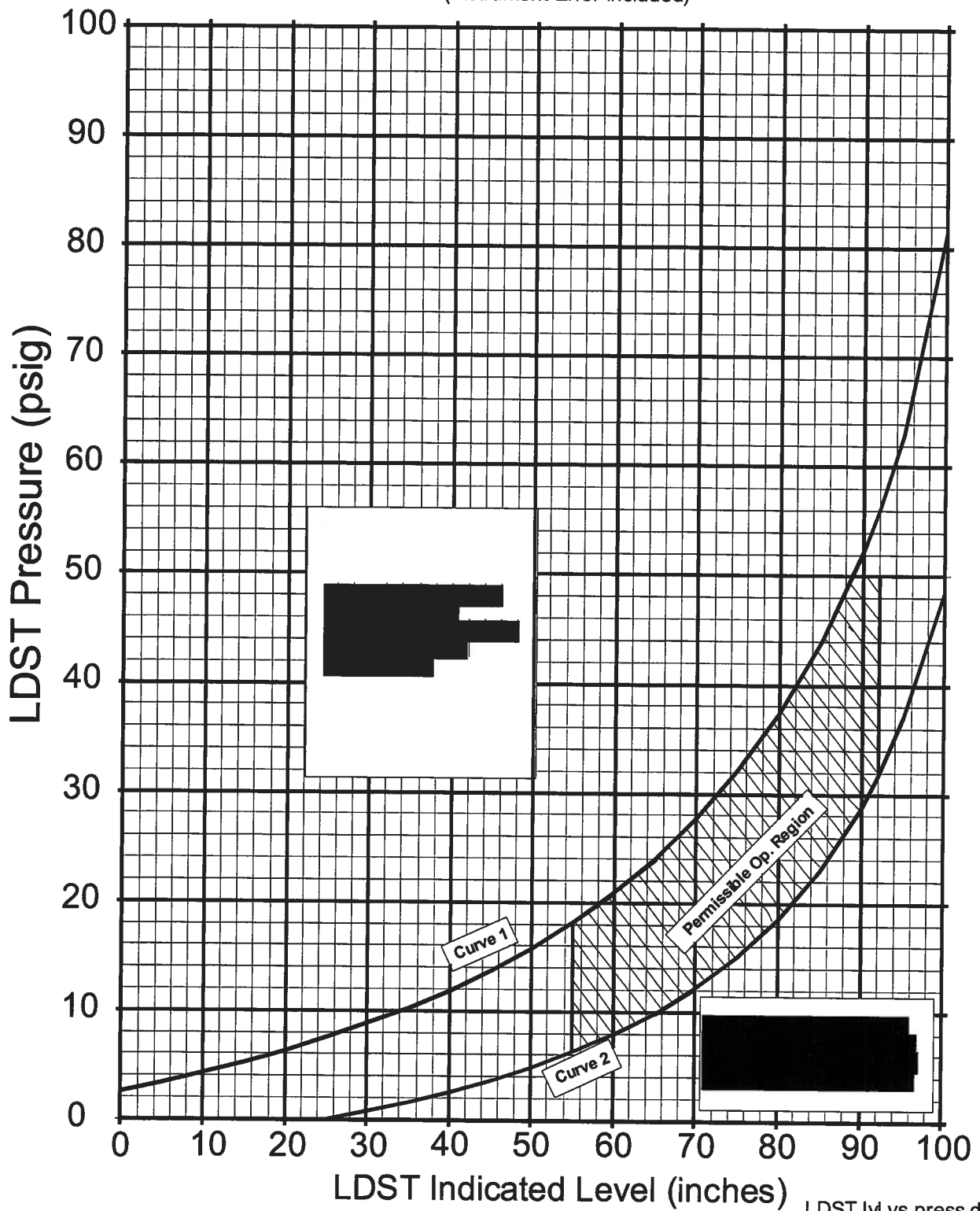
Current conditions:

- All units have been in Station Blackout for six (6) hours
  - The Emergency Coordinator is considering implementing the Oconee Severe Accident Guidelines (OSAG)
  - The SFP engineer has just recommended an extreme measure to provide urgently needed cooling to the Spent Fuel Pool under the requirements of 10CFR50.54(x). This extreme measure is NOT in accordance with station procedures, and is a departure from the Oconee licensing basis and Technical Specifications.
- 1) In accordance with RP/0/B/1000/002 (Control Room Emergency Coordinator Procedure), implementation of the OSAG       (1)       require the use of 10CFR50.54(x) and (y) provisions.
- 2) In accordance with RP/0/B/1000/002, the MINIMUM level of approval for the action to cool the Spent Fuel Pool per 10CFR50.54(x) is       (2)      .

Which ONE of the following completes the statements above?

- A.     1. does  
       2. a licensed SRO
- B.     1. does  
       2. the Emergency Coordinator
- C.     1. does NOT  
       2. a licensed SRO
- D.     1. does NOT  
       2. the Emergency Coordinator
-

**LDST Pressure Vs. Level (All Units)**  
(Instrument Error Included)



**BASES**

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**TABLE 3.3.28-1**  
**Operability Status of SSW Headers**

<b>Operability Status of LPSW Standby Pump Auto-Start Circuitry:</b>	<b>"A" and "B" SSW Header Operable</b>	<b>"B" SSW Header Inoperable</b>	<b>"A" SSW Header Inoperable</b>
Unit 3 Inoperable	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 3 per this TS</li> </ul>	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 3 per this TS</li> </ul>	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 1, 2 and 3 per this TS.</li> </ul>
Unit 1&2 Inoperable	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 1 and 2 per this TS.</li> </ul>	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 1, 2, and 3 per this TS.</li> </ul>	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 1 and 2 per this TS.</li> </ul>
Unit 1, 2 and 3 Inoperable	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 1,2 and 3 per this TS.</li> </ul>	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 1,2 and 3 per this TS.</li> </ul>	<ul style="list-style-type: none"> <li>7 day Completion Time on Unit 1,2 and 3 per this TS.</li> </ul>

NOTE: Table assumes Unit 1, 2, and 3 are in MODE 1, 2, 3, or 4.

## ***Examination KEY for: ILT43 ONS SRO NRC Examin***

<b><i>Question Number</i></b>	<b><i>Answer</i></b>
1	A
2	A
3	C
4	A
5	D
6	A
7	C
8	B
9	C
10	D
11	D
12	C
13	D
14	A
15	D
16	B
17	D
18	B
19	D
20	B
21	B
22	A
23	D
24	A
25	A



## ***Examination KEY for: ILT43 ONS SRO NRC Examin***

<b><i>Question Number</i></b>	<b><i>Answer</i></b>
26	C
27	B
28	B
29	C
30	C
31	A
32	B
33	B
34	A
35	A
36	D
37	A
38	B
39	D
40	D
41	D
42	C
43	C
44	B
45	D
46	A
47	D
48	A
49	A
50	D

## ***Examination KEY for: ILT43 ONS SRO NRC Examin***

<b><i>Question Number</i></b>	<b><i>Answer</i></b>
51	C
52	B
53	D
54	A
55	B
56	C
57	D
58	D
59	C
60	D
61	D
62	A
63	D
64	D
65	A
66	B
67	D
68	A
69	D
70	B
71	C
72	D
73	D
74	C
75	A

## ***Examination KEY for: ILT43 ONS SRO NRC Examin***

<b><i>Question Number</i></b>	<b><i>Answer</i></b>
76	C
77	D
78	B
79	B
80	B
81	C
82	B
83	D
84	A
85	B
86	A
87	B
88	C
89	B
90	A
91	B
92	B
93	D
94	C
95	A
96	D
97	D
98	D
99	B
100	A