Question: 1

(1 point)

Given the following Unit 2 conditions:

- Unit 2 tripped spuriously 25 minutes ago
- All systems responded as expected
- The CRS has entered OP/2/A/1102/010 (Controlling Procedure for Unit Shutdown), Enclosure 4.14 (S/D to Mode 3 Following Rx Trip or Rapid S/D)

Enclosure 4.14 requires that RCS temperature is maintained  $\geq$  a MINIMUM of \_\_(1)\_\_ due to \_\_(2)\_\_concerns.

- A. 1. 550 °F
  - 2. Shutdown Margin
- B. 1. 550 °F2. SSF availability
- C. 1. 532 °F 2. SSF availability
- D. 1. 532 °F
  - 2. Shutdown Margin

#### Question: 2

(1 point)

Given the following Unit 1 conditions:

Initial Conditions:

• Reactor power = 100%

Current conditions:

- 1RC-66 (PORV) indicates partially open
- 1RC-4 will NOT close from the control room
- RCS pressure is being maintained 2200 psig and stable via constant makeup flow
- 1) The Control Room Staff is required to enter \_\_(1)\_\_, which contains direction to open a breaker to fail 1RC-66 closed.
- Assuming that no operator actions are taken, as steam leaks through the PORV, the flowrate of the steam is expected to \_\_(2)\_\_ because of Quench Tank pressure, <u>over the long term</u>.

- A. 1. AP/02 (Excessive RCS Leakage)2. continually lower
- B. 1. AP/02 (Excessive RCS Leakage)2. lower then rise
- C. 1. AP/44 (Abnormal Pressurizer Pressure Control)2. continually lower
- D. 1. AP/44 (Abnormal Pressurizer Pressure Control)2. lower then rise

#### Question: 3

(1 point)

Given the following Unit 1 conditions:

Time = 0500

- Reactor Trip from 100%
- SBLOCA has occurred
- Rule 2 (Loss of SCM) in progress
- 1A and 1B MD EFDWPs are operating

Time = 0520

- Rule 7 (SG Feed Control) in progress
- RCS temperature = 470°F slowly lowering
- EFW flow = 100 gpm to each SG
- 1A and 1B SG levels = 120 inches XSUR stable

1) At 0500, in accordance with Rule 2, \_\_(1)\_\_ gpm EFDW flow will initially be established to each SG.

2) At 0520, in accordance with Rule 7 (SG Feed Control), EFDW flow should be \_\_\_(2)\_\_\_.

- A. 1. 300
  - 2. lowered
- B. 1. 300 2. raised
- C. 1. 450 2. lowered
- D. 1. 450
  - 2. raised

#### Question: 4

(1 point)

Given the following Unit 1 conditions:

- Reactor trip from 100% power
- RCS pressure = 88 psig lowering
- Reactor Building pressure = 27 psig rising
- 1B LPI Pump failed to start

Based on the above conditions, which ONE of the following describes the guidance provided in EOP Enclosure 5.1 (ES Actuation) regarding the LPI pumps and system operation?

EOP Enclosure 5.1 (ES Actuation)...

- A. directs continued operation with only the 1A LPI pump and no re-alignment of LPI header flows.
- B. directs continued operation with only the 1A LPI pump and manually re-aligns LPI flow down both the 1A and 1B LPI headers.
- C. utilizes the 1A and the 1C LPI Pump and aligns flow down both headers with 1LP-9 and 10 closed.
- D. utilizes only the 1C LPI Pump and aligns flow down both headers with 1LP-9 & 10 open.

#### Question: 5

(1 point)

Unit 3 initial conditions:

- Reactor Power = 100% stable
- 3A1 RCP Spool Piece vibration = 4 mils slowly rising

Current conditions:

- Reactor Power = 100% stable
- 3SA-9/E2 (RC PUMP VIBRATION EMERG HIGH) actuates
- 3A1 RCP Spool Piece vibration = 22 mils slowly rising

Based on the current conditions above, which ONE of the following describes how the OATC and BOP will respond to mitigate this event?

The OATC will...

- A. perform a rapid power reduction to <70% and then the BOP will manually trip the 3A1 RCP.
- B. perform a rapid power reduction to <65% and then the BOP will manually trip the 3A1 RCP.
- C. manually trip the reactor and then perform IMAs; the BOP will manually trip the 3A1 RCP and then perform a symptom check.
- D. manually trip the reactor and then perform IMAs; the BOP will perform a symptom check and then manually trip the 3A1 RCP.

#### Question: 6

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 70% stable
- Pressurizer level = 210 inches slowly lowering
- 1HP-120 (RC VOLUME CONTROL) failed closed
- AP/14 (Loss of Normal HPI Makeup and/or RCP Seal Injection) initiated

In accordance with AP/14...

- 1) RCS makeup is <u>initially</u> provided by throttling \_\_(1)\_\_.
- 2) Pressurizer level is maintained at a MINIMUM of \_\_(2)\_\_ inches.

- A. 1. 1HP-26 (1A HP INJ) 2. 200
- B. 1. 1HP-26 (1A HP INJ) 2. 80
- C. 1. 1HP-122 (RC Volume Control Bypass) 2. 200
- D. 1. 1HP-122 (RC Volume Control Bypass) 2. 80

#### Question: 7

(1 point)

Given the following Unit 1 conditions:

Time = 1000:

- U1 is in MODE 6
- Reactor vessel refueled with the head installed
- LPI operating in Normal Mode per OP/1/A/1104/004, Low Pressure Injection System
- 1A LPI Pump is in service
- Purification is NOT in service
- RCP 1B1 seal replacement is in progress
  - PZR Level: 66 inches stable
  - 1LT-5 = 81 inches stable
  - RCP seal is removed

Time = 1010:

- 1LP-12 (1A LPI Cooler Outlet) fails CLOSED.
  - Crew entered AP/26 (Loss of Decay Heat Removal), due to degraded LPI flow and rising RCS temperature

Which ONE of the following completes both statements in accordance with AP/26?

- 1) At Time = 1000, \_\_(1)\_\_ LPI Cooler(s) was/were in service.
- 2) At Time = 1010, the 1A LPI Pump \_\_\_(2)\_\_\_ required to be stopped.
- A. 1. only one 2. is
- B. 1. only one 2. is NOT
- C. 1. two 2. is
- D. 1. two 2. is NOT

#### Question: 8

(1 point)

Given the following Unit 1 conditions:

Time = 1030:

- Reactor power = 100%
- Component Cooling Return Flow = 583 gpm and lowering
- 1SA-09/C-1 (Component Cooling Return Flow Low) actuates

Time = 1032:

- Component Cooling Return Flow = 470 gpm and lowering
- The Standby CC pump is in AUTO but has NOT started
- CC Surge Tank level = 11 inches and lowering
- 1) At Time = 1030, Statalarm 1SA-09/C-1 \_\_(1)\_\_ valid.
- 2) At Time = 1032, 1SA-09/C-1 ARG (2) direct manually starting the Standby CC pump.

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

#### Question: 9

(1 point)

Given the following Unit 2 conditions:

Initial conditions:

- Unit startup in progress
- RCS temperature = 310°F slowly rising
- Maintenance in progress in the area of 2DIB panelboard

Current conditions:

• 2DIB breaker #24 (2RC-66 Pilot Valve DC solenoid power supply) is inadvertently opened

Based upon the given conditions;

1) TS LCO \_\_(1)\_\_ is NOT met.

- 2) the position of 2RC-66 is \_\_(2)\_\_.
- A. 1. 3.4.9 (Pressurizer) 2. Open
- B. 1. 3.4.9 (Pressurizer) 2. Closed
- C. 1. 3.4.12 (LTOP) 2. Open
- D. 1. 3.4.12 (LTOP) 2. Closed

#### Question: 10

(1 point)

Given the following Unit 2 conditions:

Initial conditions:

• Reactor power = 100%

Current conditions:

- Reactor trip due to Main Turbine trip
- CRD breakers opened
- Two control rods stuck at 30% withdrawn
- Reactor power = 7% and stable
- Rule 1, ATWS/Unanticipated Nuclear Power Production, is in progress

Which ONE of the following describes the actions required to <u>mitigate</u> this event and the reason for those actions?

- A. Control FDW manually until T<sub>hot</sub> stabilizes to match core heat output.
- B. Ensure 2HP-5, Letdown Isolation, is closed to conserve RCS inventory.
- C. Manually drive ALL control rods to their in-limit to ensure  $1\% \Delta k/k$  shutdown margin.
- D. Borate the RCS by aligning the BWST to the HPI suction to add negative reactivity.

#### Question: 11

(1 point)

Given the following Unit 1 conditions:

- Steam Generator Tube Rupture in 1B SG
- Tcold = 490°F slowly lowering
- RB pressure = 3.1 psig slowly lowering
- RB temperature = 203°F slowly lowering
- 1B SG pressure = 606 psig slowly lowering
- 1B SG Full Range level = 54% slowly rising
- 1) 1B SG level \_\_(1)\_\_ reached the level at which water can enter the Main Steam lines.
- Assuming 1B SG has reached the level where water enters the Main Steam line and steaming has been discontinued, the next procedural step per the SGTR tab is to \_\_(2)\_\_.

Which ONE of the following completes the statements above?

#### **REFERENCE PROVIDED**

- A. 1. has NOT2. verify the 1A SG is available for steaming
- B. 1. has2. verify the 1A SG is available for steaming
- C. 1. has NOT2. align SG blowdown to the 1B SG to lower level
- D. 1. has2. align SG blowdown to the 1B SG to lower level

#### Question: 12

(1 point)

Given the following Unit 1 conditions:

Initial Conditions:

- Reactor trip from 100% power due to 1A MSLB
- Tcold lowered to 416°F
- Core SCM lowered to 0°F

**Current Conditions:** 

- Tcold = 498°F and stable
- Core SCM = 78°F and stable
- Rule 2 (Loss of SCM) is complete
- 1A SG tube leakage = 5 gpm
- 1) \_\_(1)\_\_ was the EOP <u>tab</u> entered <u>first</u> from Subsequent Actions.
- 2) Rule 8 (Pressurized Thermal Shock) \_\_(2)\_\_ required to be invoked.

- A. 1. Loss of SCM 2. is
- B. 1. Loss of SCM2. is NOT
- C. 1. Excessive Heat Transfer 2. is
- D. 1. Excessive Heat Transfer 2. is NOT

#### Question: 13

(1 point)

Given the following plant conditions:

Initial conditions:

• All three units Reactor power = 100%

Current conditions:

- A Station Blackout occurs
- PSW Power is NOT available

In accordance with the Blackout Tab, EOP Enclosure 5.32 (Load Shed of Inverters During SBO) is performed, which results in power being removed from \_\_(1)\_\_ in order to conserve the \_\_(2)\_\_ batteries.

- A. 1. EFWPT Auxiliary Oil Pump 2. Power
- B. 1. EFWPT Auxiliary Oil Pump2. Control
- C. 1. Diverse HPI/LPI 2. Power
- D. 1. Diverse HPI/LPI
  - 2. Control

#### Question: 14

(1 point)

Given the following U1 conditions:

Initial conditions:

- U1 tripped from 100% power due to a loss of offsite power
- Power was restored to the main feeder buses
- Forced Cooldown (FCD) Tab is in progress
- Plant Management has approved a Natural Circulation (NC) cooldown

Current conditions:

- NC cooldown has commenced
- Rx vessel head vents are open

While conducting the NC cooldown, in accordance with the FCD Tab, \_\_(1)\_\_ SCM will be maintained  $\geq$  150°F in order to \_\_(2)\_\_.

- A. 1. Core2. Keep the Rx vessel head from flashing
- B. 1. Core2. Prevent voids in the tops of the hot legs
- C. 1. Loop2. Keep the Rx vessel head from flashing
- D. 1. Loop2. Prevent voids in the tops of the hot legs

#### Question: 15

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- A loss of both MFDW pumps occurs from 100% power
- Rule 3 (Loss of Main or Emergency FDW) is in progress
- 1FDW-315 and 1FDW-316 are maintaining SG levels at setpoint

Current conditions:

• 1KVIB is de-energized

Assuming no additional operator actions, which ONE of the following will be directed by the EOP?

- A. Take manual control of 1FDW-316
- B. Take manual control of 1FDW-315
- C. Feed the 1A SG through 1FDW-35
- D. Feed the 1B SG through 1FDW-44

#### Question: 16

(1 point)

Given the following Unit 1 conditions:

Time = 1300:

- Reactor power = 65%
- 1LPSW-6 (UNIT 1 RCP COOLERS SUPPLY) fails closed

Time = 1305:

- AP/16 (Abnormal RCP Operation) in progress
- RCP Temperatures:

	<u>1A1</u>	<u>1A2</u>	<u>1B1</u>	<u>1B2</u>
Radial Bearing Temperature	221°F	219°F	217°F	229°F
Seal Return Temperature	252°F	197°F	189°F	202°F

At Time = 1305, which ONE of the following is required per AP/16 Enclosure 5.1, RCP Immediate Trip Criteria?

- A. Manually trip the reactor and stop ALL RCPs
- B. Manually trip the Reactor and stop RCPs 1A1 & 1B2 ONLY
- C. Stop RCP 1A1 ONLY and verify FDW re-ratios properly
- D. Stop RCP 1B2 ONLY and verify FDW re-ratios properly

#### Question: 17

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- Instrument Air pressure = 84 psig slowly lowering
- Aux IA pressure = 78 psig lowering
- AP/1/A/1700/22 (Loss of Instrument Air) initiated

Which ONE of the following describes the actions required in accordance with AP/22 for the current conditions?

- A. Isolate RB Aux Coolers
- B. Bypass HPI Purification Demineralizer
- C. Dispatch an operator to manually open 1CC-8
- D. MANUALLY Trip the Reactor then trip BOTH Main FDW pumps

#### Question: 18

(1 point)

Given the following Unit 1 Conditions:

Initial Conditions:

- Reactor Power 100%
- TDEFWP isolated for repair

Current Conditions:

- Both Main Feedwater pumps trip
- 1A and 1B MDEFWP's fail
- NO Feedwater is available to the SGs (Main, Emergency, CBP, PSW)

Which ONE of the following describes...

1) the next method of decay heat removal directed by the EOP?

2) a criterion used to determine when this method of decay heat removal is required?

- A. 1. Initiate HPI forced cooling2. PZR level = 375 inches
- B. 1. Initiate HPI forced cooling2. BOTH SG's = 15" SU level
- C. 1. Feed SG's with SSF ASW2. PZR level = 375 inches
- D. 1. Feed SG's with SSF ASW
  - 2. BOTH SG's = 15" SU level

#### Question: 19

(1 point)

Unit 1 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

Based on the above conditions...

- 1) the CRD system \_\_(1)\_\_ generate an ICS runback.
- the MAXIMUM final power level (Core Thermal Power) directed by AP/1 (Unit Runback) is \_\_(2)\_\_.

- A. 1. will 2. <u><</u> 60%
- B. 1. will 2. <u>≤</u>45%
- C. 1. will NOT 2. ≤ 60%
- D. 1. will NOT 2. ≤ 45%

#### Question: 20

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 50%
- 1KI Panelboard is de-energized for maintenance

Current conditions:

- Crew has entered AP/42 (Inadvertent ES Actuation)
- An uncontrolled Tave decrease to outside the control band has occurred
- In accordance with AP/42 Step 4.22, the crew initiates AP/39 (Unintentional Boration)

AP/39 will FIRST direct restoration of Tave by \_\_\_\_\_.

- A. lowering CTP demand setpoint
- B. adjusting boron concentration
- C. withdrawing control rods
- D. adjusting FDW

#### Question: 21

(1 point)

Given the following Unit 1 conditions:

Initial Conditions:

• Reactor in MODE 3

Current conditions:

• <u>1DIB</u> inverter DC Input breaker trips

The associated source range NI power will be restored using the \_\_\_\_\_.

- A. Static Transfer Switch
- B. Manual Transfer Switch
- C. Inverter Bypass Switches
- D. ASCO Switch

#### Question: 22

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Unit Startup in progress per OP/1/A/1102/001 (Controlling Procedure for Unit Startup)
- Reactor power has been stabilized at 0.03% power on Wide Range Indications

Current conditions:

- <u>One</u> wide range channel start-up rate has <u>failed</u> high at 7 dpm
- 1) An OUT INHIBIT of \_\_(1)\_\_ will occur.
- Action to immediately suspend operations involving positive reactivity changes
   \_\_(2)\_\_ required in accordance with TS 3.3.10 (Wide Range Neutron Flux).

- A. 1. regulating rods ONLY2. is
- B. 1. regulating rods ONLY2. is NOT
- C. 1. ALL control rods 2. is
- D. 1. ALL control rods 2. is NOT

#### Question: 23

(1 point)

Given the following Unit 3 conditions:

- Reactor is in MODE 6
- Core offload in progress
- MP/0/A/1500/029, Reactor Bridge Operation, is in progress
- Reactor Fuel Bridge is withdrawing a fuel assembly that appears to be binding
  - 1) The \_\_(1)\_\_ interlock will stop the withdrawal of the fuel assembly to prevent fuel damage.
  - 2) The setpoint for this interlock is (2).

- A. 1. Overload 2. 1750 lb
- B. 1. Overload 2. 2500 lb
- C. 1. Hoist 2. 1750 lb
- D. 1. Hoist 2. 2500 lb

#### Question: 24

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- An automatic reactor trip occurred from 100% power
- RCS pressure = 1000 psig lowering
- Rule 2 is in progress
- ES Channels 1 and 2 have actuated
  - $\circ$  HPI Flow Train A = 604 gpm stable
  - HPI Flow Train B = 0 gpm stable

Current conditions:

- HPI Flow Train A = 414 gpm stable
- Seal Injection Flow = 32 gpm stable
- HPI Crossover header flow = 476 gpm stable
- 1SA-18/D-6 (RC System Approaching Saturation Conditions) actuated
  - Loop A SCM = negative 2°F
  - Core SCM =  $0^{\circ}$ F
- 1) For the current plant conditions, HPI Flow \_\_(1)\_\_ within the limits of Rule 6.
- 2) The ICC Tab (2) required to be entered.

- 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**

### ILT21 ONS SRO NRC Examination

#### Question: 25

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 90%
- $\Delta$  Tc ICS Station is in Hand
- 1B1 Reactor Coolant Pump shaft shears

Based on the above conditions...

- 1) the ICS system will initiate a plant runback at \_\_(1)\_\_ %/min.
- 2) once the transient stabilizes, loop A Tc will be \_\_(2)\_\_ loop B Tc.
- A. 1. 25 2. approximately the same as
- B. 1. 202. approximately the same as
- C. 1. 25 2. higher than
- D. 1. 20 2. higher than

#### Question: 26

(1 point)

Given the following Unit 3 conditions:

Initial conditions:

• Reactor power = 100%

Current conditions:

- Main Turbine has tripped
- Rule 1 (ATWS/UNPP) in progress
- 3HP-24 will NOT open
- Reactor power = 3% and lowering
- SCM = 48 °F and rising
- Pzr level = 230" and rising

The CRS has requested to be notified when HPI throttling criteria is met.

- 1) In accordance with Rule 6 (HPI Throttling Limits), HPI \_\_(1)\_\_ be throttled.
- If/When throttling HPI in accordance with Rule 6 (HPI Throttling Limits) (2).

- A. 1. may
  - 2. HPI pump operation is limited to two HPIPs
- B. 1. may NOT
  - 2. HPI pump operation is limited to two HPIPs
- C. 1. may
  2. total HPI flow must be throttled < 950 gpm including seal injection</li>
- D. 1. may NOT
  2. total HPI flow must be throttled < 950 gpm including seal injection</li>

# **Oconee Nuclear Station**

### ILT21 ONS SRO NRC Examination

#### Question: 27

(1 point)

Given the following Unit 1 conditions:

- A LOCA has occurred
- The LOCA CD tab is in progress
- Core SCM = 0°F
- Pressurizer Level is rising
- All WR NIs <u><</u>1%
- 1B HPI Header flow = 470 gpm
- 1) In accordance with Rule 6 (HPI), 1HP-27 (1B HP INJECTION) \_\_(1)\_\_ be throttled.
- If HPI flow to the "B" Injection Header was through 1HP-409 (1HP-27 Bypass), 1SA-02/E-3 (HP LOOP B INJECTION FLOW HIGH) \_\_(2)\_\_ detect a high flow condition.

- A. 1. must 2. would
- B. 1. must 2. would NOT
- C. 1. is NOT allowed to 2. would
- D. 1. is NOT allowed to
  - 2. would NOT

#### Question: 28

(1 point)

Given the following Unit 3 conditions:

Initial conditions:

- Reactor power = 100%
- CT-3 Lockout occurs

Current conditions

- Reactor trip
- MFB re-energized
- 6900V power still unavailable
- HPI system leak downstream of 3HP-31 occurs
- 3A1 RCP SI flow = 3.9 gpm slowly lowering
- 3A2 RCP SI flow = 3.7 gpm slowly lowering
- 3B1 RCP SI flow = 3.5 gpm slowly lowering
- 3B2 RCP SI flow = 3.4 gpm slowly lowering
- Seal Inlet Header Flow = 40 gpm stable

#### Assume no operator action

<u>Two</u> minutes later, which ONE of the following describes the status of the following RCP support systems valve(s)?

- A. ONLY 3HP-21 has closed
- B. ONLY 3HP-21 AND 3HP-31 have closed
- C. ONLY ALL individual seal return valves and 3HP-21 have closed
- D. ALL individual seal return valves, 3HP-21, and 3HP-31 have closed

#### Question: 29

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- 1LPSW-6 (RCP MTR COOLERS SUPPLY) fails closed

Which ONE of the following is the RCP Motor Stator MINIMUM temperature (°F) that would require immediately tripping the RCP in accordance with AP/16 (Abnormal Reactor Coolant Pump Operation)?

- A. 195
- B. 225
- C. 260
- D. 300

#### Question: 30

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 70%
- ICS in automatic
- Operators perform an RCS deboration in accordance with OP/1/A/1103/004 C, Enclosure 4.2 (Unit 1 Deborating IX for RCS Deboration (Rx At Power))

Current conditions:

• Operators observe that final control rod position is higher than expected

The potential cause for the observed plant response is \_\_\_\_\_.

- A. **higher** than anticipated letdown flow
- B. **higher** than anticipated temperature through the resin
- C. **Iower** than anticipated temperature through the resin
- D. **higher** than anticipated IX influent pH level

#### Question: 31

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 20% stable
- 1A and 1B SG Levels = 25 inches stable

Current conditions:

- 1SA-02/E-8 (STM GEN 'A' LEVEL LOW LIMIT) alarm actuates
- 1B SG Level = 25 inches stable
- 1) While 1A SG water level <u>is being raised</u>, reactor coolant makeup flow through 1HP-120, under the current conditions is expected to be \_\_(1)\_\_ than the makeup flowrate under the initial conditions.
- 2) The clearing of 1SA-02/E-8 is dependent upon 1A (2) recovery.

- A. 1. higher2. SG Level and Loop Tave
- B. 1. higher2. SG Level ONLY
- C. 1. lower 2. SG Level and Loop Tave
- D. 1. lower 2. SG Level ONLY

#### Question: 32

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Unit 1 is defueled
- LPI System is NOT in operation
- BWST in Purification

Current conditions:

- Chemistry reports BWST Boron Concentration = 2300 ppm
- The crew is preparing to fill the LPI system per OP/1/A/1104/004B Enclosure 4.3 (LPI System Fill from BWST and S/U After Defuel Maintenance) in preparation for refueling
- 1) BWST Purification is \_\_(1)\_\_ to remain in service while Enclosure 4.3 is implemented.
- 2) In accordance with OP/1/A/1502/007 Enclosure 4.1 (Refueling Prerequisites), BWST Boron Concentration (2) acceptable.

Which ONE of the following answers the statements above?

- A. 1. required 2. is
- B. 1. required
  - 2. is NOT
- C. 1. not allowed
  - 2. is
- D. 1. not allowed
  - 2. is NOT

#### Question: 33

(1 point)

Given the following Unit 2 conditions:

- LOCA CD Tab in progress
- ALL RCPs running
- ALL SCMs = 4°F rising
- Pressurizer level is 100 inches stable
- Statalarm, 2SA-07/E-6, ES LPI BYPASS PERMIT actuated
- The RCS pressure setpoint which will cause Statalarm 2SA-07/E-6 to actuate is \_\_\_(1)\_\_ psig.
- 2) LPI is (2) to be manually bypassed at this time.

- A. 1. 865
  - 2. NOT allowed
- B. 1. 865 2. required
- C. 1. 890 2. NOT allowed
- D. 1. 890 2. required

#### Question: 34

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- Quench Tank is being pumped to 1A BHUT using the Quench Tank Pump and the Component Drain Pump
- 1) In accordance with OP/1/A/1104/017 (Quench Tank Operations), Quench Tank Level shall be maintained at a MAXIMUM of \_\_(1)\_\_ inches.
- 2) The Component Drain Pump (2) automatically trip once Quench Tank Level reaches 80 inches.

- A. 1.90
  - 2. will
- B. 1. 90 2. will NOT
- C. 1. 100 2. will
- D. 1. 100 2. will NOT

#### Question: 35

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- 1A CC Pump is in ON and is running
- 1B CC Pump is in AUTO and is off

Current conditions:

- The air supply to 1CC-8 completely severs
- An operator has been dispatched to manually re-position 1CC-8

Concerning the CC pumps...

- 1) 30 seconds after 1CC-8 repositions due to the failure, \_\_(1)\_\_ pump will be running.
- 2) after 1CC-8 is manually placed back to its original position before the air supply failure \_\_(2)\_\_ CC pump(s) will be running.

- A. 1. neither 2. the 1A & 1B
- B. 1. neither2. only the 1A
- C. 1. the 1A 2. the 1A & 1B
- D. 1. the 1A 2. only the 1A

#### Question: 36

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- Loss of ALL feedwater occurs
- 1) The MINIMUM RCS pressure (psig) at which Quench Tank level would begin to RISE is \_\_(1)\_\_ psig.
- 2) The MINIMUM Quench Tank Pressure (psig) at which Containment pressure would begin to RISE is \_\_(2)\_\_ psig.

- A. 1. 2450 2. 49
- B. 1. 2450 2. 55
- C. 1. 2500 2. 49
- D. 1. 2500 2. 55
### Question: 37

(1 point)

Given the following U1 conditions:

Initial conditions:

- Reactor power = 100%
- Loss of all Main and Emergency Feedwater pumps occurs

Current conditions:

- Rule 3 is in progress at the step to manually throttle TBVs
- RCS temperature = 560°F rising
- RCS pressure = 2300 psig rising
- SCM > 0°F

Which ONE of the following identifies the <u>next</u> action that the operating crew will perform?

- A. Initiation of HPI Forced Cooling
- B. Feed SG's with Condensate Booster Pump
- C. Secure all but one RCP due to RCS Pressure
- D. Secure all RCPs to reduce heat input into the RCS

### Question: 38

(1 point)

Given the following Unit 2 conditions:

Initial conditions:

• Reactor power = 100%

Current conditions:

- 2TA and 2TB lockout
- Reactor power = 1% and lowering
- Two Group 2 control rods = 100% withdrawn
- The remaining control rods are fully inserted
- CRD Breakers A thru D are closed
- 1) RPS \_\_(1)\_\_ trip the reactor.
- EP/2/A/1800/001 IMAs and Subsequent Actions requires the operator to \_\_(2)\_\_.

- A. 1. did2. OPEN 600 V CRD Breakers
- B. 1. did NOT2. OPEN 600 V CRD Breakers
- C. 1. did 2. OPEN 2HP-26 and 2HP-27
- D. 1. did NOT2. OPEN 2HP-26 and 2HP-27

### Question: 39

(1 point)

Given the following Unit 2 conditions:

Initial conditions:

- MDEFWPs = AUTO 2 Position
- Both Main FDW Pumps tripped from 100% power
- 2A and 2B SG XSUR Levels = 100 inches and lowering

Current conditions:

- The common airline to 2FDW-316 valve actuator is completely severed
- IF NO operator action is taken for 15 minutes, the 2B SG XSUR level will \_\_\_(1)\_\_\_.
- 2) The required operator action to control 2B SG level is performed \_\_(2)\_\_.

- A. 1. still be lowering2. in the control room by aligning valves and throttling 2FDW-44
- B. 1. still be lowering2. locally in the plant by throttling 2FDW-316
- C. 1. be rising2. in the control room by aligning valves and throttling 2FDW-44
- D. 1. be rising2. locally in the plant by throttling 2FDW-316

### Question: 40

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- RBCUs running in HIGH speed
- A Component Cooling (CC) system leak inside the RB caused a loss of CC cooling to the Control Rod Drive (CRD) units
- Operators entered AP/1/A/1700/20 (Loss of Component Cooling)

Based on the current conditions, AP/20 states that if CRD stator cooling is lost, stator temperatures will reach a trip value in approximately \_\_\_\_\_.

- A. 4 minutes
- B. 30 minutes
- C. 1 hour
- D. 3 hours

### Question: 41

(1 point)

Given the following U3 conditions:

Initial conditions:

- A large seismic event has caused multiple equipment failures
- 3TD switchgear locked out and remains de-energized
- LBLOCA is in progress
- RB Pressure = 8.5 psig rising

Current conditions:

- ES Channel 8 automatically actuates
- ES Channel 7 fails to actuate

Assuming no operator action...

- 1) At least one RB Spray (RBS) pump \_\_(1)\_\_ automatically start.
- 2) At least one RBS discharge valve (3BS-1 or 3BS-2) (2) automatically open.

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

### Question: 42

(1 point)

Given the following Unit 3 conditions:

- Reactor tripped from 100% power
- Steam pressure was lowered to reseat a lifting MS relief valve
- RCS temperature = 544°F slowly rising

Based on the conditions above, which one of the following Turbine Master **<u>setpoint</u> <u>knob</u>** positions would result in stabilizing RCS temperature 544°F?

- A. 995 psig
- B. 980 psig
- C. 930 psig
- D. 855 psig

### Question: 43

(1 point)

Given the following Unit 1 conditions:

- Unit 1 is reducing power for a refueling outage
- Reactor power = 5% and lowering
- 1A OTSG SUR level is 24 inches
- 1B OTSG SUR level is 26 inches

The ICS system controlling input for the feedwater signal for the A SG is (1) and for the B SG is (2).

- A. 1. Startup Level Error
  - 2. Feedwater Flow Error
- B. 1. Startup Level Error 2. Startup Level Error
- C. 1. Feedwater Flow Error 2. Startup Level Error
- D. 1. Feedwater Flow Error 2. Feedwater Flow Error

#### Question: 44

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- ICS SG Master is in MANUAL

Current conditions:

 1FDW-11 (1B1 FDW Htr Inlet (3-Way)) has been inadvertently placed in BYPASS

Which ONE of the following describes the Unit 1 plant response?

Assuming no operator response,  $\Delta Tc$  will be \_\_\_(1)\_\_ and the ICS system \_\_(2)\_\_ automatically compensate feedwater flow for the change in feedwater temperature.

- A. 1. higher
  - 2. will
- B. 1. higher 2. will not
- C. 1. the same
  - 2. will
- D. 1. the same 2. will not

#### Question: 45

(1 point)

Given the following Unit 1 conditions:

Time = 0400:

- Reactor power = 100%
- Both Main FDW pumps trip

Time = 0403:

- 1A and 1B MDEFDW Pumps operating
- Power has been lost to the 1FDW-316 Moore Controller ONLY

Which ONE of the following describes the response of "1B" SG level?

### ASSUME NO OPERATOR ACTION

- A. Decrease to "dryout"
- B. Automatically controlled at 30"
- C. Automatically controlled at 240"
- D. Increase to overflow into the steam lines

#### Question: 46

(1 point)

Unit 1 & 2 "B" LPSW Pump 4160 Volt AC electrical power is supplied from Switchgear \_\_\_\_\_.

- A. 1TC only
- B. 2TC only
- C. 1TD only
- D. 1TD or 2TD

### Question: 47

(1 point)

Given the following Unit 1 conditions:

- 1DCA and 1DCB Bus tie circuit breakers are in their normal position
- 1DIB Panelboard is receiving one source of auctioneered DC power from \_\_(1)\_\_ Bus.
- 1DIB Panelboard is receiving another source of auctioneered DC power from \_\_(2)\_\_ Bus.

- A. 1. 1DCA
  - 2. 2DCB
- B. 1. 1DCA2. 3DCB
- C. 1. 1DCB 2. 2DCB
- D. 1. 1DCB 2. 3DCB

### Question: 48

(1 point)

Given the following plant conditions:

Time = 1400

- All three units at 100% power
- Unit 3 125V I&C Vital DC system has a ground on the P-leg

Time = 1420

• Units 1, 2, and 3 DC busses have been isolated per ARG actions

At Time = 1420, the magnitude of the ground \_\_\_\_\_.

- A. can <u>NOT</u> be assessed on any Unit's Operator Aid Computer
- B. can be assessed on <u>ONLY</u> the Unit 1 Operator Aid Computer
- C. can be assessed on <u>ONLY</u> the Unit 3 Operator Aid Computer
- D. can be assessed on ANY Unit's Operator Aid Computer

#### Question: 49

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- ACB-4 closed
- A Switchyard Isolation occurs

Current conditions:

- Keowee Unit 2 Emergency lockout
- 230 KV Yellow Bus Differential lockout

Main Feeder buses will be energized \_\_(1)\_\_ from \_\_(2)\_\_.

- A. 1. manually
  - 2. CT-4
- B. 1. automatically 2. CT-4
- C. 1. manually 2. CT-5
- D. 1. automatically
  - 2. CT-5

### Question: 50

(1 point)

Given the following Unit 1 plant conditions:

Initial conditions:

- Reactor trip from 100% power due to a loss of offsite power (Switchyard Isolation)
- CT-1 lockout

Current conditions:

- AP/11 (Recovery from Loss of Power) initiated
- 1SA-15 D-4, EL LOAD SHED CHNL A LOGIC INITIATE, is in alarm
- 1SA-15 A-6, LOAD SHED INCOMPLETE, is in alarm
- LOAD SHED COMPLETE is not indicated on any ES Channel
- Two Hotwell Pumps (HWPs) remain operating

1) In accordance with AP/11, operators are required to \_\_(1)\_\_.

2) This action is required to (2).

- A. 1. place <u>all</u> HWPs to OFF2. ensure CT-4 is not overloaded
- B. 1. place <u>all</u> HWPs to OFF2. ensure adequate voltage is available for ES components
- C. 1. reduce HWPs to <u>only one</u> HWP operating with one shutdown HWP in AUTO
  - 2. ensure CT-4 is not overloaded
- D. 1. reduce HWPs to <u>only one</u> HWP operating with one shutdown HWP in AUTO
  - 2. ensure adequate voltage is available for ES components

### Question: 51

(1 point)

Given the following Unit 1 conditions:

At time: 1200

- Reactor Power = 45%
- 1A Steam Generator tube leak of 5.1 gpd
- RCS activity = 0.25 µCi/ml DEI rising

At time: 1400

- Reactor Power = 45%
- 1A Steam Generator tube leak of 5.1 gpd
- RCS activity = 0.65 µCi/ml DEI rising
- 1) Between 1200 and 1400, 1RIA-16 indication will \_\_(1)\_\_.
- 2) At 1400 and in accordance with AP/31 (Primary to Secondary Leakage), 1RIA-59 (2) be used to calculate SG tube leak size.

- A. 1. rise 2. will
- B. 1. rise 2. will NOT
- C. 1. stay the same 2. will
- D. 1. stay the same
  - 2. will NOT

### Question: 52

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- 'A' and 'B' LPSW pumps are OFF and cannot be restarted
- AP/24 (Loss of LPSW) has been initiated
- In accordance with AP/20 (Loss of Component Cooling), the LOWEST CRD temperature that will require a Reactor trip is \_\_(1)\_\_ °F.

2) RCW system temperatures would be expected to \_\_(2)\_\_.

Which ONE of the following completes the statements above?

- A. 1. 140 2. remain unchanged
- B. 1. 140 2. rise
- C. 1. 180 2. remain unchanged
- D. 1. 180 2. rise

Page 52 of 100

### Question: 53

(1 point)

Given the following Unit 1 conditions:

• Reactor power = 100%

Which ONE of the following describes an effect of a loss of LPSW?

- A. In a subsequent LOCA, RCS cooling would be reduced during the recirculation phase
- B. In a subsequent LOHT, the TDEFDW pump would overheat
- C. The Primary IA Compressor would overheat
- D. The HPI pump motors would overheat

#### Question: 54

(1 point)

Unit 2 initial conditions:

- Reactor power = 100%
- IA pressure = 95 psig slowly lowering

Current conditions:

• IA pressure = 60 psig slowly lowering

Based on the above conditions, which ONE of the following describes status of the Main and Startup FDW control valves?

- A. 2FDW-35 and 44 (Startup FDW Control Valves) have failed closed and 2FDW-32 and 41 (Main FDW Control Valves) are controlling Main FDW flow.
- B. 2FDW-35 and 44 (Startup FDW Control Valves) and 2FDW-32 and 41 (Main FDW Control Valves) have failed CLOSED.
- C. 2FDW-35 and 44 (Startup FDW Control Valves) and 2FDW-32 and 41 (Main FDW Control Valves) have failed OPEN.
- D. 2FDW-35 and 44 (Startup FDW Control Valves) and 2FDW-32 and 41 (Main FDW Control Valves) have failed "as is".

# **Oconee Nuclear Station**

### ILT21 ONS SRO NRC Examination

Question: 55

(1 point)

Given the following Unit 1 conditions:

Time = 1200

- Reactor in MODE 5
- RCS Loops dropped
- Pressurizer level = 340 inches stable
- RB Cavity washdown in progress
- RB Purge in progress
- Reactor Building Sump is being pumped
- Time = 1205
  - Pressurizer level 322 inches lowering
  - 1RIA-49 (Reactor Building High Gas) in HIGH alarm
- 1) The Containment Evacuation alarm \_\_(1)\_\_ AUTOMATICALLY actuate as a result of the 1RIA-49 HIGH alarm.

2) (2) is the procedure that is required to be entered FIRST.

- A. 1. will2. AP/26 (Loss of Decay Heat Removal)
- B. 1. will2. AP/2 (Excessive RCS Leakage)
- C. 1. will NOT2. AP/26 (Loss of Decay Heat Removal)
- D. 1. will NOT2. AP/2 (Excessive RCS Leakage)

### Question: 56

(1 point)

Given the following Unit 1 conditions:

- Startup in progress in accordance with OP/1/A/1102/001 Enclosure 4.7, Unit Startup from 532°F/2155 psig to MODE 1
- 1) A Control Rod Out Inhibit will be received if Startup Rate exceeds \_\_(1)\_\_ DPM on one Wide Range (WR) channel.
- 2) A Control Rod Out Inhibit \_\_(2)\_\_ be generated when a <u>Source Range</u> (SR) nuclear instrument instantaneously fails high.

- A. 1.1 2. will
- B. 1.2 2. will
- C. 1. 1 2. will NOT
- D. 1. 2 2. will NOT

### Question: 57

(1 point)

Given the following Unit 1 conditions:

Time = 0400

- Reactor trip from 100% power due to a loss of offsite power
- Forced Cooldown (FCD) tab in progress
- Tcold = 550°F stable

Time = 0500

- RCS pressure = 2155 psig stable
- A Natural Circulation cooldown is initiated
- 1RC-160 (RX Vessel Head Vent) is open
- 1RC-159 (RX Vessel Head Vent) will NOT open
- 1) At 0400 and in accordance with the FCD tab, the MAXIMUM allowable cooldown rate is \_\_(1)\_\_.
- 2) During the cooldown, Reactor Vessel head voids \_\_(2)\_\_ expected to occur.

- A. 1. <50°F/hr 2. are
- B. 1. <50°F/hr
  - 2. are NOT
- C. 1. <u><</u>50°F/½ hr 2. are
- D. 1. <u><</u>50°F/½ hr 2. are NOT

#### Question: 58

(1 point)

Given the following Unit 1 conditions:

Time = 0900:

- Reactor startup in progress
- Wide Range (WR) NI power = 4E-3% and rising

Time = 0905:

• All WR NIs are declared INOPERABLE

In accordance with TS 3.3.10 (Wide Range Neutron Flux)...

- 1) At Time = 0905, \_\_(1)\_\_ wide range neutron flux channels are required to be OPERABLE.
- 2) The CRD trip breakers are required to be opened \_\_(2)\_\_.

- A. 1. 2 (two) 2. immediately
- B. 1. 3 (three) 2. immediately
- C. 1. 2 (two) 2. within 1 hour
- D. 1. 3 (three) 2. within 1 hour

### Question: 59

(1 point)

Given the following Unit 1 conditions:

Time = 0400:

- Reactor power = 100%
- An ICCM Train 'B' qualified CETC develops an open circuit in the detector

Time = 0430:

- Core SCM = 0°F
- RB pressure = 8 psig
- 1) At 0400, this CETC \_\_(1)\_\_ be used in ICCM Train 'B' Core SCM calculation.
- 2) At 0430, (2) CETCs will be used in ICCM Train 'B' Core SCM calculation.

- A. 1. will
  - 2. 5
- B. 1. will 2. 4
- C. 1. will NOT 2. 5
- D. 1. will NOT 2. 4

### Question: 60

(1 point)

Which ONE of the following are the electrical power supplies to the Penetration Room Ventilation (PRV) Fans?

	PRV Fan 'A'	PRV Fan 'B' 
A.	XS1	XS2
В.	XS2	XS1
C.	XS4	XS5
D.	XS5	XS4

Question: 61

(1 point)

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

#### Question: 62

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 80%
- 1A HWP is being investigated by Maintenance due to lower than normal discharge pressure

Current conditions:

- 1B HWP spuriously trips
- Condensate Booster Pump suction pressure lowers to 13 psig
- A runback is in progress

Based upon current plant conditions, and in accordance with AP/01 (Unit Runback)...

- 1) The runback will continue until \_\_(1)\_\_.
- Enclosure 5.1 (Control of Plant Equipment during Runback) will direct the operators to \_\_\_(2)\_\_\_.

- A. 1. 15% rated power2. secure the E Heater Drain Pumps
- B. 1. 15% rated power2. maintain Pressurizer level between 200 and 220 inches
- C. 1. >16 psig CBP suction pressure2. secure the E Heater Drain Pumps
- D. 1. >16 psig CBP suction pressure2. maintain Pressurizer level between 200 and 220 inches

#### Question: 63

(1 point)

Given the following plant conditions:

Time = 16:05:00

- All 3 Units Reactor power = 100%
- 'A' and 'B' LPSW pumps operating
- Switchyard Isolate occurs
- Time = 16:05:30
  - Unit 1&2 MFB 1 & 2 re-energized
- 1) A and B LPSW pumps restarted at Time = \_\_(1)\_\_.
- 2) Unit 1 & 2 LPSW is supplied via the ECCW (2) siphon flowpath.

- A. 1. 16:05:40
  - 2. first
- B. 1. 16:05:40 2. second
- C. 1. 16:05:30 2. first
- D. 1. 16:05:30 2. second

#### Question: 64

(1 point)

Given the following plant conditions:

• IA header pressure = 88 psig lowering

The Diesel Air Compressors are \_\_(1)\_\_ and SA-141 (SA to IA Controller) is \_\_(2)\_\_.

- A. 1. Operating
  - 2. Open
- B. 1. Operating
  - 2. Closed
- C. 1. Shutdown
  - 2. Open
- D. 1. Shutdown
  - 2. Closed

#### Question: 65

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- 1SA-3/B-6 (FIRE ALARM) comes into alarm
- The Fire Brigade is using a fire hose to fight a fire in the U1 TB Basement

1) The 'Standby' HPSW pump start when EWST level lowers to \_\_(1)\_\_ gallons.

2) The (2) HPSW pump is normally aligned as the 'Standby' pump.

### Assume no operator actions taken by Control Room operators

- A. 1. 50,000 2. 'A'
  - 2. A
- B. 1. 60,000 2. 'A'
- C. 1. 50,000 2. 'B'
- D. 1. 60,000 2. 'B'

### Question: 66

(1 point)

Unit 1 is operating at 100% power.

Which ONE of the following comparisons is allowed to complete the following step per PT/1/A/0600/001, Periodic Instrument Surveillance, Enclosure 13.1, Mode 1 & 2?

Step 1.3 Verify diverse power indications within +/- 2.0%.

- A. **COMPARE** the NI average **TO** the OAC Calculated Thermal Power Primary
- B. **COMPARE** the OAC Calculated Thermal Power Primary **TO** the OAC Calculated Thermal Power  $\Delta$ T
- C. **COMPARE** the OAC Calculated Thermal Power Best **TO** the OAC Calculated Thermal Power  $\Delta T$
- D. **COMPARE** each NI **TO** the NI average

### Question: 67

(1 point)

Given the following plant conditions:

Time = 1000:

- All three Oconee Units = 100% power
- Load Dispatch calls with a request to make a voltage adjustment

Time = 1030:

- The Shift Manager and other licensed operators participate in a conference call with other station departments to coordinate a previously-scheduled electrical bus outage that will begin later on this shift.
- In accordance with section 5.1.3, (Log Entry Details and Accuracy), of procedure AD-OP-ALL-0112, (OPERATIONS LOG KEEPING AND CHART RECORDERS) ...
- (1) the <u>name</u> of the individual load dispatch, or the <u>name</u> of the operator who received the call from the load dispatch, \_\_(1)\_\_ required to be included in the narrative log, AND
- (2) the conference call with other departments to coordinate the previously-scheduled electrical bus outage \_\_(2)\_\_ required to be included in the narrative log.

- 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

### ILT21 ONS SRO NRC Examination

### Question: 68

(1 point)

Given the following Unit 1 conditions:

- Reactor in MODE 6
- RB Purge in progress
- Defueling in progress
- All four Source Range NIs are OPERABLE

In accordance with MP/0/A/1500/009 (Defueling/Refueling Procedure)...

- 1) a MINIMUM of \_\_(1)\_\_ Source Range NI(s) is/are required.
- 2) immediate suspension of fuel handling would be required if \_\_(2)\_\_.

- A. 1. one 2. 1RIA-49 fails LOW
- B. 1. one2. Fuel Transfer Canal water level is 21 feet lowering
- C. 1. two 2. 1RIA-49 fails LOW
- D. 1. two2. Fuel Transfer Canal water level is 21 feet lowering

#### Question: 69

(1 point)

In accordance with AD-HU-ALL-0005 (HUMAN PERFORMANCE TOOLS), which ONE of the following describes...

- 1) a condition which would allow Independent Verification (IV) of a single valve to be waived?
- 2) the minimum level of approval required?

### NOTE: Assume the IV of a single valve requires 30 seconds to perform

- A. 1. Dose received will be = 14 mr for a single check2. Plant SRO
- B. 1. Valve located in a room where the area dose rate = 878 mr/hr2. Plant SRO
- C. 1. Dose received will be = 14 mr for a single check
  - 2. Operations Superintendent
- D. 1. Valve located in a room where the area dose rate = 878 mr/hr2. Operations Superintendent

### Question: 70

(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

Selecting the 'Turbine Load' pushbutton sends a signal to \_\_(1)\_\_ and is performed \_\_(2)\_\_ paralleling to the grid.

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

Question: 71

(1 point)

Given the following plant conditions:

- Radiation Monitor Check (PT/0/A/0230/001) enclosure 13.7, RIA-45 setpoints for Unit 1&2 GWD tank release, is in progress
- The Unit 1&2 GWD tank release will be made at <u>2/3</u> of the station limit

To reset the Alert Setpoint for 3RIA-45 in accordance with (PT/0/A/0230/001) enclosure 13.7,

- 1) Unit 3 RB purge \_\_(1)\_\_ required to be off.
- 2) GWD release on Unit 3 (2) be in progress.

- A. 1. is 2. can
  - Z. Gan
- B. 1. is 2. can NOT
- C. 1. is NOT 2. can
- D. 1. is NOT 2. can NOT

### Question: 72

(1 point)

In accordance with AD-EP-ALL-0205 (Emergency Exposure Controls), which one of the following completes the statement below?

To protect valuable property the **MAXIMUM** total effective dose equivalent (TEDE) exposure limit is \_\_\_\_\_\_ REM.

Α.	5	
B.	10	
C.	15	
D.	25	
### Question: 73

(1 point)

Given the following Unit 1 conditions:

• Reactor power = 100%

Which ONE of the following would require entry into the EOP?

- A. Reactor power increases to 102%
- B. Group 2 Rod 6 Control Rod fully inserts into the core AND Group 2 Rod 5 slips 6% below Group 2 average height
- C. Reactor Coolant System leakage in the RB of 55 gpm
- D. Reactor Coolant System pressure increases to 2360 psig

### Question: 74

(1 point)

Given the following plant conditions:

Initial conditions:

- Units 1 and 3 are at 100% power
- Unit 2 is in Mode 5 with primary hand holes removed and the Fuel Transfer Canal NOT flooded

Current conditions:

• Security staff has informed the control room that a Code Red exists with Unit 2 being the affected unit

In accordance with AP/0/A/1700/045, Site Security Threats, which two of the following are correct?

- 1) Ensure a licensed operator has been dispatched to the SSF with a respirator and flashlight, for each unit.
- 2) Ensure an operator from the Control Room has been dispatched to the Unit 2 LPI hatch area to immediately open LP-21/22
- 3) Ensure a licensed operator has been dispatched to the SSF for Units 1 and 3 ONLY with a respirator and flashlight
- 4) Ensure an operator from the Control Room has been dispatched to the Unit 2 LPI hatch area with a flashlight and radio to open LP-21/22 when directed
- A. 1 and 2
- B. 3 and 2
- C. 1 and 4
- D. 3 and 4

### Question: 75

(1 point)

Given the following Unit 1 conditions:

- AP/0/A/1700/045 (Site Security Threats) has been entered and enclosure 5.1.A, Unit 1 Actions for Imminent Aircraft Threat are in progress
- The crew has tripped the Reactor, completed EOP IMAs and Symptoms check
- 1) Steam Generator level setpoints \_\_(1)\_\_ be controlled in accordance with AP/0/A/1700/045.
- 2) AP/0/A/1700/045 (2) designated as proprietary information.

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

### Question: 76

(1 point)

Given the following Unit 1 conditions:

Time = 1200

- Reactor power = 100% stable
- AFIS bypassed for maintenance
- SA-16/C-1 (230 KV Swyd Isolate ES Permit) actuated
- 230 KV Yellow Bus voltage = 224.2 KV rising

Time = 1201

- AP/34 (Degraded Grid) in progress
- Main Turbine trips due to low grid frequency
- 230 KV Yellow Bus voltage = 226.8 KV rising
- RCS pressure = 1245 psig rapidly lowering
- RB pressure = 11.4 psig rapidly rising
- Tave = 545°F slowly lowering

At Time = 1201, Engineered Safeguards systems...

- 1) will be energized from \_\_(1)\_\_.
- 2) \_\_(2)\_\_ sufficient to maintain Reactor Building pressure within design limits.

Which ONE of the following completes the statements above?

A. 1. CT-1 2. are

Β.

- 1. CT-1 2. are NOT
- C. 1. CT-4 2. are
- D. 1. CT-4 2. are NOT

### Question: 77

(1 point)

Given the following Unit 1 conditions: Initial conditions:

- Reactor power = 100%
- BOTH channels of AMSAC disabled

Current conditions:

- Both Main Feedwater Pumps Tripped
- Reactor power = 60% and slowly lowering
- 1) 1A MDEFWP, 1B MDEFWP AND the TDEFWP \_\_(1)\_\_ automatically start.
- In accordance with B&W analysis, a MINIMUM of \_\_(2)\_\_ gallons per minute of Emergency Feedwater flow is required to limit the RCS pressure increase to below the design standard for this event.

- A. 1. will
  - 2. 750
- B. 1. will NOT2. 750
- C. 1. will 2. 375
- D. 1. will NOT 2. 375

### Question: 78

(1 point)

Given the following Unit 1 conditions:

Time = 1200:

- Reactor startup in progress
- Reactor power = 3% stable
- The operating Main Feedwater Pump trips

Time = 1200:15

• The SRO directs the OATC to perform IMAs

Time = 1202:

- Reactor power = 3% <u>stable</u>
- 1) The reactor \_\_(1)\_\_ automatically trip at Time = 1200 when the operating FDW pump tripped.
- 2) The SRO should (2).

- A. 1. should2. perform actions in the Subsequent Actions tab to shut down the reactor
- B. 1. should2. GO TO the UNPP tab to perform actions to shut down the reactor
- C. 1. should NOT2. perform actions in the Subsequent Actions tab to shut down the reactor
- D. 1. should NOT2. GO TO the UNPP tab to perform actions to shut down the reactor

### Question: 79

(1 point)

Given the following U2 conditions:

Initial Conditions:

- Unit 2 TDEFW pump is tagged out for bearing replacement
- A station blackout has occurred for all Oconee units
- Rule 3, Loss of Main or Emergency Feedwater is in progress
- PSW is unavailable

**Current Conditions:** 

- Unit 2 RCS pressure is 2325 psig and rising
- No source of feedwater has been established for Unit 2
- Two (2) Unit 2 Control Room Operators are available
- The SSF is available for ASW and RCMU

In accordance with Unit 2 EOP Blackout Tab, the CRS for Unit 2 will direct which of the following actions?

- A. Perform Rule 4, HPI Forced Cooling
- B. Re-perform Rule 3, Loss of Main or Emergency Feedwater
- C. Perform EOP enclosure 5.38, Restoration of Power
- D. Perform Unit 1 EOP enclosure 5.42, Alignment of Portable Pump to Feed SGs

#### Question: 80

(1 point)

Given the following plant conditions:

Time = 1100:

- All three Oconee Units at 100% power
- 3KVIB panelboard de-energized

Time = 1200:

- 1SA-13/E-7 (Power Panelboard 1DIC Voltage Low) is in alarm
- 1DIC panelboard is de-energized
- At Time = 1100, the basis for the shorter completion time of TS 3.8.8 Condition F for <u>KVIA or KVIB</u> OOS is due to providing power for the \_\_\_(1)\_\_\_.
- At Time = 1200, TS LCO 3.8.8 (Distribution Systems Operating), is NOT met for \_\_(2)\_\_.

- A. 1. digital Engineered Safeguards Protective System (ESPS) channels2. Units 1 AND 3 ONLY
- B. 1. S, SK, and SL breakers, standby bus protective relaying, and retransfer to startup logic
   2. Units 1 AND 3 ONLY
- C. 1. digital Engineered Safeguards Protective System (ESPS) channels2. Units 1, 2, AND 3
- D. 1. S, SK, and SL breakers, standby bus protective relaying, and retransfer to startup logic
   2. Units 1, 2. AND 2.
  - 2. Units 1, 2, AND 3

### Question: 81

(1 point)

Given the following Unit 1 conditions:

Time = 0800:

- Reactor power = 50%
- Unit 1 is supplying the AS header
- 1RC-66, (PORV) fails open
- 1RC-4, (PORV BLOCK) fails to close

Time = 0810:

- LOSCM tab is in progress
- HPI flow could only be established in the 1A header
- MD EFDW pumps FAIL to start
- TD EFDWP is supplying feedwater to both SGs
- Rapid SG depressurization has begun
- Both SGs should be depressurized to 250 275 psig band because this will prevent \_\_(1)\_\_.
- IF the RCS cooldown results in an increase in neutron flux, the CRS will \_\_\_(2)\_\_\_.

- A. 1. emptying the CFTs introducing nitrogen to the RCS2. GO TO the UNPP tab
- B. 1. emptying the CFTs introducing nitrogen to the RCS2. remain in the LOSCM
- C. 1. overcooling and exceeding SG Tube-to-Shell ΔT limits2. GO TO the UNPP tab
- D. 1. overcooling and exceeding SG Tube-to-Shell ΔT limits2. remain in the LOSCM

#### Question: 82

(1 point)

Given the following U1 conditions:

Initial conditions:

• Reactor power = 100%

Current conditions:

- 1A SG has a 165 gpd tube leak
- 1B SG has a 21 gpm tube leak
- 1) The reactor should be taken off line in accordance with \_\_(1)\_\_.
- 2) The TS 3.4.11 (RCS Specific Activity) Bases limit for primary to secondary leakage is based upon the safety analysis for a \_\_(2)\_\_ following a reactor trip from 100% reactor power in order to ensure the dose consequences are less than the limits in 10 CFR 100.

- A. 1. SGTR Tab 2. stuck open MSRV
- B. 1. SGTR Tab2. Steam Line Break accident
- C. 1. AP/31 (Primary to Secondary Leakage)2. stuck open MSRV
- D. 1. AP/31 (Primary to Secondary Leakage)
  - 2. Steam Line Break accident

### Question: 83

(1 point)

Given the following Unit 3 conditions:

Initial conditions:

- A "Challenging Fire" which requires the evacuation of the Unit 3 Control Room is in progress
- Unit 3 has entered the following Abnormal Procedures:
  - AP/0/A/1700/043 (Fire Brigade Response Procedure)
  - AP/0/A/1700/025 (Standby Shutdown Facility Emergency Operating Procedure)
  - AP/3/A/1700/050 (Challenging Plant Fire)

**Current Conditions** 

- AP/50 Section 4G (Unit 3 Control Room Evacuation) is in progress
  - The crew has not yet left the control room
- 1) In accordance with AP/43, a "Challenging Fire" is defined as \_\_(1)\_\_.
- Per AP/50 Enclosure 4G, the CRS is required to HOLD until AP/25 Enclosure (2) is completed prior to directing the OATC to perform Enc 5.5 (OATC Actions for Control Room Evacuation) per Step 3.

- A. 1. a fire in the plant that is NOT extinguished within 15 minutes of Control Room notification
  - 2. 5.11 (SSF Breaker Transfer for Unit 3)
- B. 1. a fire in the plant that is NOT extinguished within 15 minutes of Control Room notification
  - 2. 5.15C (U3 OATC Actions for Fire)
- C. 1. a fire that is burning cables (bundles/trays which have the potential to affect additional equipment)
  - 2. 5.11 (SSF Breaker Transfer for Unit 3)
- D. 1. a fire that is burning cables (bundles/trays which have the potential to affect additional equipment)
  - 2. 5.15C (U3 OATC Actions for Fire)

### Question: 84

(1 point)

Given the following plant conditions:

 Unit 2 has entered MODE 6, and operators are making preparations to begin core off-load

Which ONE of the following completes the below statements in accordance with the BASES of Technical Specification LCO 3.9.3, "Containment Penetrations?"

- (1) Placement of a temporary cover plate installed and sealed against the inner emergency air lock door flange gasket is an acceptable means for providing containment closure; \_\_(1)\_\_.
- (2) Prior to beginning fuel handling operations, \_\_(2)\_\_ the requirement that the air lock be closed, which constitutes operability for this requirement.
- A. 1. but all cables, hoses, or service air piping run through the temporary cover plate are required to be removed
  - 2. a one-time leak test of the temporary cover plate over the emergency air lock is required to satisfy
- B. 1. but all cables, hoses, or service air piping run through the temporary cover plate are required to be removed
  - 2. leak testing is NOT required; visual inspection of the temporary cover plate over the emergency air lock satisfies
- C. 1. as long as all cables, hoses, and/or service air piping run through the temporary cover plate sleeves are installed and sealed
  - 2. a one-time leak test of the temporary cover plate over the emergency air lock is required to satisfy
- D. 1. as long as all cables, hoses, and/or service air piping run through the temporary cover plate sleeves are installed and sealed
  - 2. leak testing is NOT required; visual inspection of the temporary cover plate over the emergency air lock satisfies

### Question: 85

(1 point)

Unit 1 plant conditions:

- Reactor power = 100% stable
- RCS DEI = 0.5 µCi/gm stable
- AP/21 (High Activity in RCS) in progress

Based on the above conditions, which ONE of the following correctly states:

- 1) whether AP/21 requires a power reduction to be initiated?
- 2) the procedure used by AP/21 to perform the power reduction when a shutdown is required?
- A. 1. Initiation of power reduction NOT required2. OP/1/A/1102/004 (Operation at Power)
- B. 1. Initiation of power reduction NOT required2. AP/29 (Rapid Unit Shutdown)
- C. 1. Initiation of power reduction IS required 2. OP/1/A/1102/004 (Operation at Power)
- D. 1. Initiation of power reduction IS required2. AP/29 (Rapid Unit Shutdown)

### Question: 86

(1 point)

Unit 1 plant conditions:

- Reactor is in MODE 3
- Startup is in progress
- 1B LPI Train flow instrument is found to be NOT operable

Based on the conditions above, which one of the following completes the statements below in accordance with Technical Specifications Bases?

- 1) The operating crew is required to declare \_\_(1)\_\_ NOT operable.
- 2) Entry into MODE 2 (2) permitted.
- A. 1. 1B LPI Train ONLY 2. is
- B. 1. 1B LPI Train ONLY2. is NOT
- C. 1. BOTH 1B LPI Train and 1B RBS Train 2. is
- D. 1. BOTH 1B LPI Train and 1B RBS Train 2. is NOT

### Question: 87

(1 point)

Given the following Unit 1 conditions:

- OP/1/A/1103/002, (Filling and Venting RCS) Enclosure 4.14 (Establishing Pzr Steam Bubble and RCS Final Vent) in progress
- Quench Tank level = 84 inches
- Quench Tank pressure = 0.5 psig
- The Pressurizer is vented to the Quench Tank for 30 minutes

Based on the above conditions, which ONE of the following describes:

- 1) QT pressure (psig) that would verify Pzr Steam Bubble Formation is complete?
- actions required for entry into MODE 4 in accordance with Tech Specs if 1GWD-12 (QUENCH TANK VENT INSIDE RB) failed to close during system realignment following Pzr steam bubble formation?

#### **REFERENCE PROVIDED**

- A. 1. 0.6
  - 2. allowed ONLY when 1GWD-12 is restored to OPERABLE
- B. 1. 0.6
  - 2. allowed if 1GWD-13 (QUENCH TANK VENT OUTSIDE RB) is closed and de-activated
- C. 1. 2.5
  - 2. allowed ONLY when 1GWD-12 is restored to OPERABLE
- D. 1. 2.5
  - 2. allowed if 1GWD-13 (QUENCH TANK VENT OUTSIDE RB) is closed and de-activated

#### Question: 88

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 100%
- 1B RPS Channel in MANUAL BYPASS

Current conditions:

- RC Loop A NR Press 1 (RPS Ch A) = 1790 psig
- RC Loop A NR Press 2 (RPS Ch B) = 2153 psig
- RC Loop B NR Press 1 (RPS Ch C) = 2156 psig
- RC Loop B NR Press 2 (RPS Ch D) = 2150 psig
- 1SA-01/A-2 (Channel A Lo Press Trip) actuates
- 1SA-01/A-5 (1A Var Lo Press Trip) actuates
- 1SA-05/A-5 (1A RPS Trouble) actuates
- 1) In accordance with Tech Spec 3.3.1, RPS Channel A Low RCS Pressure Trip function at this time is \_\_(1)\_\_.
- 2) In accordance with OP/1/A/1105/014 (Control Room Instrumentation Operation And Information) RPS Channel A \_\_(2)\_\_.

Which ONE of the following completes the statements above?

A. 1. operable

D.

- 2. must be placed in trip with the key switch
- B. 1. NOT operable2. must be placed in trip with the key switch
- C. 1. operable2. is unaffected due to the 2.min actuation logic
  - NOT operable
     is unaffected due to the 2.min actuation logic

### Question: 89

(1 point)

Time = 2100 on June 1, 2020:

- Unit 2 Reactor power = 100%
- The '2A' Reactor Building Spray (RBS) pump is declared INOPERABLE and Unit 2 enters the appropriate CONDITION(s) of Technical Specification (TS) LCO 3.6.5, "Reactor Building Spray and Cooling Systems"

Time = 1400 on June 3, 2020:

• The '2C' Reactor Building Cooling Unit (RBCU) is declared INOPERABLE and Unit 2 enters the appropriate CONDITION(s) of LCO 3.6.5

Current Conditions at Time = 1800 on June 6, 2020:

- You are the oncoming Unit 2 SRO after several weeks of leave
- Both the 2A RBS pump and the 2C RBCU have remained INOPERABLE
- All other RBS and RBCU components have been and are OPERABLE
- Unit 2 has complied with all applicable LCO 3.6.5 REQUIRED ACTIONS and COMPLETION TIMES

Based on the current conditions, which ONE of the following was/is the correct application of TS LCO 3.6.5?

### **REFERENCE PROVIDED**

- A. Unit 2 is simultaneously in CONDITIONS A and B. LCO 3.6.5 allows continued operation in MODE 1. The COMPLETION TIME of REQUIRED ACTION A.1 is currently the most limiting/will expire before the COMPLETION TIME of REQUIRED ACTION B.1.
- B. Unit 2 was required to enter MODE 3 based on REQUIRED ACTION D.1. When Unit 2 entered MODE 3, LCO 3.6.5 was met. None of the LCO 3.6.5 REQUIRED ACTIONS are now applicable.
- C. Unit 2 was required to enter MODE 3 based on REQUIRED ACTION D.1. When Unit 2 entered MODE 3, simultaneous entry into CONDITIONS E and F was required. The COMPLETION TIMEs for CONDITIONS E and F have expired. Unit 2 is currently in LCO 3.6.5 CONDITION G and REQUIRED ACTION G.1.
- D. Unit 2 was required to enter MODE 3 based on REQUIRED ACTION D.1. When Unit 2 entered MODE 3, entry into CONDITION H was required. Unit 2 was required to enter MODE 5 based on REQUIRED ACTION H.1. When Unit 2 entered MODE 5, LCO 3.6.5 became NOT APPLICABLE.

### Question: 90

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- 1FDW-372 is discovered closed and will NOT open

1) In accordance with TS 3.7.5 (Emergency Feedwater) basis the \_\_ (1) \_\_ is inoperable.

2) If 1FDW-372 remains INOPERABLE, entering MODE 4 \_\_ (2) \_\_ required.

Which ONE of the following completes the statements above?

#### **REFERENCE PROVIDED**

- A. 1. 1A MDEFDWP 2. is
- B. 1. 1A MDEFDWP 2. is NOT
- C. 1. 1A EFW flow path 2. is
- D. 1. 1A EFW flow path 2. is NOT

# **Oconee Nuclear Station**

### ILT21 ONS SRO NRC Examination

### Question: 91

(1 point)

Given the following Unit 1 conditions:

- Unit 1 is in Mode 5
- RB Main Purge start in progress
- 1) The RB Main Purge Fan will be prevented from starting if \_\_(1)\_\_.
- In accordance with TS 3.6.3 Bases, <u>all</u> of the RB Main Purge System valves \_\_(2)\_\_ be required to be operable prior to Mode 4.

- A. 1. Suction pressure = 5 inches of water vacuum2. will
- B. 1. 1PR-3 (RB PURGE CONTROL) indicates 5% open2. will
- C. 1. Suction pressure = 5 inches of water vacuum2. will NOT
- D. 1. 1PR-3 (RB PURGE CONTROL) indicates 5 % open2. will NOT

### Question: 92

(1 point)

Given the following plant conditions:

Initial conditions:

• Unit 3 is at 25% power, starting up after a refueling outage

Current conditions:

- All three units experience a Station Blackout
- 1 hour later, power is still not restored
- Unit 3 Spent Fuel Pool (SFP) temperature is 135°F and slowly rising
- AP/3/A/1700/035 (Loss of SFP Cooling and/or Level) is in progress
- 1) In accordance with AP/35, if the SFP begins to boil, makeup to the SFP with up to \_\_(1)\_\_ gpm will be required to offset the loss of inventory.
- 2) When power is restored, AP/35 (2) restart SFP cooling pumps.

- A. 1. 32 2. will
- B. 1. 70 2. will
- C. 1. 32
  - 2. will NOT
- D. 1. 70 2. will NOT

### Question: 93

(1 point)

Which ONE of the following states the review and MINIMUM level of approval <u>required</u> by MP/0/A/1500/009, Defueling/Refueling Procedure, to place a fuel assembly into an alternate location other than the one assigned by the Core Reload Sequence per PT/0/A/0750/018?

- A. Refueling SRO must review and SM must approve
- B. Reactor Engineering must review and Refueling SRO must approve
- C. Reactor Engineering and Refueling SRO must review and SM must approve
- D. No reviews are required by Reactor Engineering or SM, but Refueling SRO must approve

### Question: 94

(1 point)

Given the following Unit 1 conditions:

• Auxiliary Operators are being briefed to perform the alignment for U1 RCS Boration as directed by OP/1/A/1103/004A Enclosure 4.2 (RCS Boration from CBAST with 1A Bleed Transfer Pump).

In accordance with AD-OP-ALL-0203 (Reactivity Management)...

- 1) A designated Senior Reactor Operator \_\_(1)\_\_ required to be physically present as oversight for non-emergency field reactivity manipulations.
- 2) Peer checks for non-emergency field reactivity manipulations (2) be performed by Auxiliary Operators.
- A. 1. is 2. may
- B. 1. is 2. may NOT
- C. 1. is NOT 2. may
- D. 1. is NOT 2. may NOT

### Question: 95

(1 point)

Given the following Unit 2 conditions:

- Reactor in MODE 6
- Defueling in progress
- Main Bridge is located over the West Upender and has begun lowering a fuel assembly for transport to the Spent Fuel Pool in accordance with procedure
- Spotter sees an unidentifiable object inside the West Upender
- In accordance with AD-OP-ONS-0001 (ONS OPERATIONS ADMINISTRATIVE COMMITMENTS), the \_\_(1)\_\_ can authorize withdrawing the assembly back into the mast to prevent damage to the assembly that would occur if lowered onto the object.
- 2) The MAXIMUM time allowed to establish Containment Closure during fuel handling is \_\_(2)\_\_ in accordance with SLC 16.12.6 (Fuel Damage During Fuel Handling Operations in Containment).

- A. 1. Refueling SRO ONLY2. 30 minutes
- B. 1. Reactor Building SRO or the Refueling SRO2. 30 minutes
- C. 1. Refueling SRO ONLY 2. one hour
- D. 1. Reactor Building SRO or the Refueling SRO2. one hour

### Question: 96

(1 point)

Given the following plant conditions:

Initial conditions:

- All three units are at 100% power
- Unit 1 entered AP/1/A/1700/032 (Loss of Letdown) at 1600 on a Saturday.

Current conditions:

- It is identified that a step in the procedure cannot be performed as written
- It is decided that a Temporary Procedure Change will be made to AP/32
- It is determined that PRA Coding could be affected by the change.

In accordance with AD-DC-ALL-0201, Development and Maintenance of Controlled Procedure Manual Procedures...

- 1) Two members of plant Management must approve the Temporary Change, and \_\_(1)\_\_ of them must hold an SRO License.
- 2) The \_\_(2)\_\_ will review the change and make any needed PRA coding changes.

- A. 1. one 2. SM
  - 2. 311
- B. 1. one 2. STA
- C. 1. both 2. SM
- D. 1. both 2. STA

### Question: 97

(1 point)

Given the following plant conditions:

### Time = 0730 (today)

- Unit 1:
  - GWR release of the 1A Gaseous Waste Disposal (GWD) tank at the 1/3 Station Limit is in progress
- Unit 3:
  - Shift is preparing for a GWR release of the 3A Gaseous Waste Disposal (GWD) tank at the 1/3 Station Limit
  - P/A/C filter is not available for the 3A release
  - 3A GWD tank holdup time is 29 days

### Time = 1600 (today)

- Unit 1:
  - o GWR release of 1A Gaseous Waste Disposal (GWD) tank is complete

#### Time = 1200 (tomorrow)

- Unit 3:
  - P/A/C filter is available for 3A release

Which ONE of the following describes the EARLIEST time that conditions are met for a non-SM qualified SRO to have the level of authority for approval of the above release in accordance with OP/3/A/1104/018 (GWD System)?

- A. 0730 (today)
- B. 1600 (today)
- C. 0800 (tomorrow)
- D. 1200 (tomorrow)

### Question: 98

(1 point)

Given the following U1 conditions:

- MODE 3
- 115 gpm RCS leak from 1A2 RCP suction pipe weld
- 1RIA-40 (CSAE Off Gas) in alarm
  - O1P1599 (Est Total Pri to Sec Leakrate) = 50,400 gpd
- The plant condition that would require the SRO to implement Emergency Dose Limits is \_\_(1)\_\_.
- 2) In accordance with the Bases of TS 3.4.13 (RCS Operational Leakage), the total RCS Pressure Boundary Leakage is \_\_(2)\_\_.

- A. 1. 115 gpm RCS leak from 1A2 RCP suction pipe weld2. 115 gpm + 50,400 gpd
- B. 1. 115 gpm RCS leak from 1A2 RCP suction pipe weld2. 115 gpm
- C. 1. O1P1599 (Est Total Pri to Sec Leakrate) = 50,400 gpd 2. 115 gpm + 50,400 gpd
- D. 1. O1P1599 (Est Total Pri to Sec Leakrate) = 50,400 gpd 2. 115 gpm

### Question: 99

(1 point)

Given the following Unit 1 conditions:

- Reactor power = 100%
- Turbine Building Flood in progress
- AP/1/A/1700/010, (Turbine Building Flood) initiated
- 1) The CRS will direct manually tripping the Reactor in accordance with \_\_(1)\_\_.
- 2) Once the Reactor is tripped, the CRS will direct feeding the Steam Generators in accordance with \_\_(2)\_\_.

- A. 1. AP/10 2. Rule 7
  - \_\_\_\_\_
- B. 1. AP/102. Turbine Building Flood tab
- C. 1. the EOP 2. Rule 7
- D. 1. the EOP2. Turbine Building Flood tab

#### Question: 100

(1 point)

Given the following Unit 1 conditions:

Initial conditions:

- Time = 0900
- Reactor power = 100% stable (steady state)

Subsequent conditions:

- 0905: A runback occurs due to a loss of a MFW Pump
- 0907: Plant has been stabilized at lower power level following the runback
- 0915: A loss of ALL CETC indication occurs
- 0925: An unidentified RCS leak of 15 gpm occurs
- 0935: Reactor trip occurs

Which ONE of the following states the time when an Emergency Plan Declaration is FIRST required?

### NOTE: Emergency Coordinator judgement is not to be used.

- A. 0920
- B. 0930
- C. 0940
- D. 0950

### <u>NOTE</u>

- Values in table below represent indicated % full range SG level at which water can enter steam lines.
- If RB Temperature indication is unavailable, utilize RB pressure on the bottom row to calculate % full range SG level at which water can enter steam lines.

	RB Press	RB Press $\geq$ 3 psig						
	< 3	Tem	perature c	correction	only appl	ies if RB I	$\mathbf{Press is} \geq 3$	8 psig
	psig							
RB Temp	10							
$(^{\circ}F) \rightarrow SG Press (psig) \downarrow$	N/A	< 150	150 to < 200	200 to < 250	250 to < 300	300 to < 350	350 to < 400	≥ 400
0	58.7	59.7	60.7	62.7	64.7	66.7	69.7	72.7
> 0 to 50	56.4	57.4	58.4	60.4	62.4	64.4	67.4	70.4
> 50 to 100	55.2	56.2	57.2	59.2	61.2	63.2	66.2	69.2
> 100 to 150	54.2	55.2	56.2	58.2	60.2	62.2	65.2	68.2
> 150 to 200	53.4	54.4	55.4	57.4	59.4	61.4	64.4	67.4
> 200 to 300	52.2	53.2	54.2	56.2	58.2	60.2	63.2	66.2
> 300 to 400	51.2	52.2	53.2	55.2	57.2	59.2	62.2	65.2
> 400 to 500	50.3	51.3	52.3	54.3	56.3	58.3	61.3	64.3
> 500 to 600	49.5	50.5	51.5	53.5	55.5	57.5	60.5	63.5
> 600 to 700	48.7	49.7	50.7	52.7	54.7	56.7	59.7	62.7
> 700 to 800	48.0	49.0	50.0	52.0	54.0	56.0	59.0	62.0
> 800 to 900	47.4	48.4	49.4	51.4	53.4	55.4	58.4	61.4
> 900 to 1000	46.8	47.8	48.8	50.8	52.8	54.8	57.8	60.8
>1000	46.2	47.2	48.2	50.2	52.2	54.2	57.2	60.2
SG Press								
$(psig) \uparrow$		3.0	5.0	15.0	35.0	72.5	140.0	
RB	< 3.0	to	to	to	to	to	to	≥170.0
Press		< 5.0	< 15.0	< 35.0	< 72.5	< 140.0	< 170.0	
$(psig) \rightarrow$								

#### 3.6 CONTAINMENT SYSTEMS

#### 3.6.3 Containment Isolation Valves

LCO 3.6.3 Each containment isolation valve shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3, and 4.

#### ACTIONS

-----NOTES-----

- 1. Penetration flow paths except for 48 inch purge valve penetration flow paths may be unisolated intermittently under administrative controls.
- 2. Separate Condition entry is allowed for each penetration flow path.
- 3. Enter applicable Conditions and Required Actions for system(s) made inoperable by containment isolation valves.

\_\_\_\_\_

CONDITION		REQUIRED ACTION		COMPLETION TIME
Α.	NOTE Only applicable to penetration flow paths with two containment isolation valves.  One or more penetration flow paths with one containment isolation valve inoperable.	A.1 <u>AND</u>	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, one closed and de-activated non-automatic power operated valve, closed manual valve, blind flange, or check valve with flow through the valve secured.	4 hours (continued)

ACTIONS

CONDITION		R	EQUIRED ACTION	COMPLETION TIME
Α.	(continued)	A.2	<ul> <li>NOTE</li></ul>	Once per 31 days for isolation devices outside containment <u>AND</u> Prior to entering MODE 4 from MODE 5 if not performed within the previous 92 days for isolation devices inside containment
B.	NOTE Only applicable to penetration flow paths with two containment isolation valves.  One or more penetration flow paths with two containment isolation valves inoperable.	B.1	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, one closed and de-activated non-automatic power operated valve, closed manual valve, or blind flange.	1 hour

(continued)

ACTIONS (	(continued)

CONDITION		RE	EQUIRED ACTION	COMPLETION TIME
C.	NOTE Only applicable to penetration flow paths with only one containment isolation valve and a closed system.  One or more penetration flow paths with one containment isolation valve inoperable.	C.1 <u>AND</u> C.2	Isolate the affected penetration flow path by use of at least one closed and de-activated automatic valve, one closed and de-activated non-automatic power operated valve, closed manual valve, or blind flange.	4 hours Once per 31 days
D.	Required Action and associated Completion Time not met.	D.1 <u>AND</u>	Be in MODE 3.	12 hours
		D.2	Be in MODE 5.	36 hours

#### 3.6 CONTAINMENT SYSTEMS

3.6.5 Reactor Building Spray and Cooling Systems

LCO 3.6.5 Two reactor building spray trains and three reactor building cooling trains shall be OPERABLE.

Only one train of reactor building spray and two trains of reactor building cooling are required to be OPERABLE during MODES 3 and 4.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION		RI	EQUIRED ACTION	COMPLETION TIME
A.	One reactor building spray train inoperable in MODE 1 or 2.	A.1	Restore reactor building spray train to OPERABLE status.	7 days <u>AND</u> 14 days from discovery of failure to meet the LCO
В.	One reactor building cooling train inoperable in MODE 1 or 2.	B.1	Restore reactor building cooling train to OPERABLE status.	7 days <u>AND</u> 14 days from discovery of failure to meet the LCO

(continued)

ACTIONS	(continued)

CONDITION		R	EQUIRED ACTION	COMPLETION TIME
C.	One reactor building spray train and one reactor building cooling train inoperable in MODE 1 or 2.	C.1	Restore one train to OPERABLE status.	24 hours
D.	Required Action and associated Completion Time of Condition A, B, or C are not met.	D.1	Be in MODE 3.	12 hours
E.	One required reactor building cooling train inoperable in MODE 3 or 4.	E.1	Restore required reactor building cooling train to OPERABLE status.	24 hours
F.	One required reactor building spray train inoperable in MODE 3 or 4.	F.1	Restore required reactor building spray train to OPERABLE status.	24 hours
G.	Required Action and associated Completion Time of Condition E or F not met.	G.1	Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION		REQUIRED ACTION		COMPLETION TIME
Н.	Two reactor building spray trains inoperable in MODE 1 or 2.	H.1	Enter LCO 3.0.3.	Immediately
	OR			
	Two reactor building cooling trains inoperable in MODE 1 or 2.			
	<u>OR</u>			
	Any combination of three or more trains inoperable in MODE 1 or 2.			
	<u>OR</u>			
	Any combination of two or more required trains inoperable in MODE 3 or 4.			

#### 3.7 PLANT SYSTEMS

#### 3.7.5 Emergency Feedwater (EFW) System

LCO 3.7.5 The EFW System shall be OPERABLE as follows:

- a. Three EFW pumps shall be OPERABLE, and
- b. Two EFW flow paths shall be OPERABLE.

Only one motor driven emergency feedwater (MDEFW) pump and one EFW flow path are required to be OPERABLE in MODE 4.

APPLICABILITY: MODES 1, 2, and 3, MODE 4 when steam generator is relied upon for heat removal.

#### ACTIONS

CONDITION		REQUIRED ACTION		COMPLETION TIME
Α.	One MDEFW pump inoperable in MODE 1, 2, or 3.	A.1	Restore MDEFW pump to OPERABLE status.	7 days <u>AND</u> 10 days from discovery of failure to meet the LCO
B.	Turbine driven EFW pump inoperable in MODE 1, 2, or 3. OR One EFW flow path inoperable in MODE 1, 2, or 3.	B.1	Restore turbine driven EFW pump and EFW flow path to OPERABLE status.	72 hours <u>AND</u> 10 days from discovery of failure to meet the LCO

(continued)

OCONEE UNITS 1, 2, & 3
ACTIONS (continued)

CONDITION		R	EQUIRED ACTION	COMPLETION TIME	
C.	Two MDEFW pumps inoperable in MODE 1, 2, or 3.	C.1	Restore one MDEFW pump to OPERABLE status.	12 hours	
D.	Required Action and associated Completion Time of Condition A, B, or C not met. <u>OR</u>	D.1 <u>AND</u> D.2	Be in MODE 3. Be in MODE 4.	12 hours 24 hours	
	Turbine driven EFW pump and one EFW flow path inoperable in MODE 1, 2, or 3.				

(continued)

ACTIONS (continued)

CONDITION		R	EQUIRED ACTION	COMPLETION TIME	
E.	Three EFW pumps inoperable in MODE 1, 2, or 3. OR Two EFW flow path inoperable in MODE 1, 2, or 3.	E.1	NOTE LCO 3.0.3 and all other LCO Required Actions requiring MODE changes are suspended until one EFW pump and one EFW flow path are restored to OPERABLE status.  Initiate action to restore one EFW pump and one EFW flow path to OPERABLE status.	Immediately	
F.	Required MDEFW pump inoperable in MODE 4. <u>OR</u> Required EFW flow path inoperable in MODE 4.	F.1	Initiate action to restore required MDEFW pump and required EFW flow path to OPERABLE status.	Immediately	

## Examination KEY ILT21 ONS SRO NRC Examination

Q	A	Q	A	Q	A	Q	A
1	D	26	В	51	А	76	С
2	D	27	D	52	С	77	А
3	В	28	D	53	А	78	В
4	А	29	D	54	D	79	С
5	С	30	В	55	В	80	С
6	А	31	А	56	D	81	В
7	D	32	D	57	А	82	D
8	D	33	В	58	С	83	D
9	D	34	С	59	С	84	D
10	D	35	А	60	А	85	С
11	В	36	В	61	D	86	D
12	А	37	В	62	С	87	В
13	D	38	В	63	С	88	В
14	С	39	С	64	В	89	В
15	В	40	А	65	А	90	А
16	D	41	D	66	С	91	D
17	С	42	D	67	В	92	В
18	А	43	А	68	D	93	В
19	D	44	С	69	А	94	С
20	D	45	В	70	D	95	В
21	В	46	D	71	В	96	В
22	D	47	А	72	В	97	D
23	В	48	А	73	D	98	D
24	В	49	А	74	D	99	В
25	В	50	А	75	Α	100	В