

# Draft Submittal

**OCONEE JUNE 2005 EXAM  
50-269, 270, & 287/2005-301**

**JUNE 20 - 24, 2005  
JUNE 30, 2005 (WRITTEN)**

1. Senior Reactor Operator Written Exam

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

**DRAFT**

1. 002A2.03 001

- Unit 1 is operating at 95% Power.
- 1SA-9/D2 (RCP Vibration High) actuated.
- 1SA-16/D2 (RC Pump Motor 1B1 Oil Pot Low Level) actuated.
- All RCPs seal leakage flow = 0 gpm.
- 1B1 Seal Return Temperature = 190 °F and stable.
  
- 1B1 Motor Bearing temperatures:
  - Upper Thrust Bearing = 180 °F and slowly rising.
  - Upper Guide = 175 °F and stable.
  - Lower Guide = 165 °F and stable.

Which ONE of the following actions and the reasons for the actions are required to be performed in accordance with AP/1/1700/016 "Abnormal Reactor Coolant Pump Operation" ?

- A. Trip the reactor, Stop 1B1 RCP due to high seal temperature, exit AP/1/1700/016.
- B. Reduce Power using Enclosure 5.2 "Rapid Power Reduction", when reactor power is less than 70 % stop 1B1 RCP due to high seal temperature, continue actions of AP/1/1700/016.
- C. Trip the reactor, Stop 1B1 RCP due to high upper thrust bearing temperature, exit AP/1/1700/016.
- D. Reduce Power using Enclosure 5.2 "Rapid Power Reduction", when reactor power is less than 70 % stop 1B1 RCP due to upper thrust bearing temperature, continue actions of AP/1/1700/016.

## QUESTIONS REPORT

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New Question, developed using Oconee Bank question EAP210701 RCP AP (RCP Trip Criteria), and AP/1/1700/016.

- A. Incorrect, with the current plant conditions seal temperature is stable, and there is no reason to trip the pump immediately.
- B. Incorrect, these are the correct actions but for the wrong reason.
- C. Incorrect, Conditions do not warrant tripping the RCP immediately.
- D. Correct, these are the actions directed by AP/1/1700/016 to control or mitigate the conditions occurring at this time.

K/A 002A2.03 Ability to (a) predict the impacts of the following on the Reactor Coolant system and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation, Loss of forced circulation.  
(4.1/4.3)

**QUESTIONS REPORT**  
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2. 005A2.04 001

- A Large Break LOCA is in progress on Unit 1.
- BWST level is 18.5'
- Encl 5.12 "ECCS Suction Swap" is in progress.
- 1A and 1B LPI Pumps are running, with Total LPI flow of 2800gpm.
- Total HPI flow is 900 gpm.
- BOP operator reports that 1LP-15 will not open.

Which ONE of the following describes the impact that the valve failure will have and what actions/limitations will be required?

- A. Piggy-Back flow will be supplied to **ONLY** one train of HPI; limit Total HPI flow to less than 750 gpm.
- B. Piggy-Back flow will be supplied to **BOTH** trains of HPI; limit Total HPI flow to less than 750 gpm.
- C. Piggy-Back flow will be supplied to **ONLY** one train of HPI; maximize Total LPI flow < 3100 gpm by increasing HPI flow.
- D. Piggy-Back flow will be supplied to **BOTH** trains of HPI; maximize Total LPI flow < 3100 gpm by increasing HPI flow.

New question developed to match K/A. Referenced Enclosure 5.12 .Lesson Plan OP-OC-EAP-ESA objective # 9, and OP-OC-EAP-LCD objective # 7.

- A. Incorrect, both trains of HPI will be supplying water to the core the suction line is coss-connected.
- B. Correct, flow will be provided to both trains, and HPI flow should be limited to < 750 gpm.
- C. Incorrect, both trains will have flow total LPI flow is not limited.
- D. Incorrect, total LPI flow is not limited.

K/A: Ability to (a) predict the impacts of the following on the RHR system; and (b) based on those predictions , use procedures to correct, control, or mitigate the consequences of those abnormal operation. (2.9/2.9)

Utility No Comments

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

3. 006A2.11 001

-A CFT/LPI nozzle line break has occurred on Unit 3 at the connection to the RCS.

Which ONE of the following describes the impact this will have on the plant, and what actions are required to mitigate this event?

- A. One CFT and HPI header is adequate to provide for abundant core cooling, operators must manually open LP-10 and close LP-18.
- B. One CFT and HPI header is adequate to provide for abundant core cooling, operators can close LP-10 and LP-18.
- C. Abundant cooling criteria is not met, operators must manually open LP-10 and close LP-18.
- D. Abundant cooling criteria is not met, operators must manually close LP-10 and LP-18.

New question developed to match K/A. OP-OC-PNS-LPI page 44. Objective 35.

- A. Incorrect, this alignment is not adequate to provide for abundant core cooling, but these actions would mitigate the event.
- B. Incorrect, this alignment is not adequate to provide for abundant core cooling, and these actions would isolate the B train LPI pump.
- C. Correct, this is the correct impact and actions to mitigate.
- D. Incorrect, this is the correct impact, but not the actions to mitigate.

K/A: Ability to (a) predict the impacts of the following on the emergency core cooling and (b) based on those predictions use procedures to correct, control or mitigate the consequences of those abnormal operations Rupture of ECCS header.

## QUESTIONS REPORT

for Oconee SRO 2005-301 Draft Questions

4. 007EA2.04 001

Initial Conditions:

- Unit 3 power level is 45%.
- Condensate flow rapidly decreases to 0 gpm.

Current Conditions:

- Total loss of feed occurred
- Power is at 37% and slowly decreasing
- Diamond is in Manual
- CRD "joy stick" locked in the insert position
- RCS pressure is 2410 psig and increasing
- Pressurizer level is 380" and increasing
- 3 HP-26 (3A HP INJECTION ) fully open
- 3C HPIP is tripped
- Seal Inlet HDR flow is 20 gpm and increasing

Which ONE of the following is the correct procedure to enter and the appropriate action to take to help mitigate the event?

- A. RULE 1 ATWS/UNPP; Open 3HP-24 and 25, START 3B HPIP and throttle 3-HP-410(3HP BYPASS) to achieve  $\leq 475$  gpm in the 3B HPI Crossover Header.
- B. RULE 1 ATWS/UNPP; Open 3HP-24 and 25, START 3B HPIP and open 3HP-409 (3HP-27BYPASS)
- C. RULE 4 INITIATION OF HPI FORCED COOLING; From RULE 3 LOSS OF MAIN OR EMERGENCY FDW and open 3-HP-410 HP-26 BYPASS)
- D. RULE 4 INITIATION OF HPI FORCED COOLING; From RULE 3 LOSS OF MAIN OR EMERGENCY FDW and START 3A or 3B HPIP and open 3RC-66 (Pressurizer PORV)

Modified from Oconee bank question EAP 110801 (212) Rule 1,3 and 4.

- A. Incorrect, correct procedure, but not required to throttle HPI flow if two HPI pumps are operating in the header.
- B. Correct, correct procedure, and actions IAW Rule 1.
- C. Incorrect, this would be applicable if an ATWS was not in progress.
- D. Incorrect, the B HPIP should remain in service due to 3C tripping, wrong procedure.

K/A: Ability to determine and interpret the following as they apply to Ractor Trip: if reactor should have tripped but has not done so, manually trip reactor and carry outactions in ATWS EOP. (4.6/4.4)

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

5. 008AG2.1.20 001

- Unit 1 is operating at 100% power.
  - RCS Pressure is 2020 psig and slowly decreasing
  - Pressurizer levels channel 1 is 220" level 2 (selected) is 225" and both are slowly rising, Channel 3 indicates 290" and is rising.
  - RCS leakage rate has been determined to be 25 gpm
- A. PZR PORV 1-RC-66 is leaking by, enter AP/1/1700/002 "Excessive RCS Leakage, and close 1RC-4 PORV BLOCK valve then refer to Technical Specification 3.4.9 "Pressurizer" for LCO.
- B. Pressurizer Level channel 3 is failing high, enter AP/1/1700/028 "ICS Instrument Failures"; then refer to Technical Specification 3.3.1 "RPS Instrumentation" for LCO.
- C. Pressurizer Level Channel 3 has a vapor space leak on the variable leg, trip the reactor and enter the EOP EP/1/1800/001 IMA and SAs.
- D. Pressurizer Level Channel 3 has a vapor space leak on the reference leg, enter AP/1/1700 "Excessive RCS Leakage", and initiate a unit shutdown.

New question developed to match K/A.

- A. Incorrect, conditions listed are not indicative of a PORV leaking by.
- B. Incorrect, Pressurizer level is failing high, but ICS instrument failure procedure has no actions for a pressurizer level failure.
- C. Incorrect, leak is on the reference leg and pressure is not low enough yet to trip the reactor.
- D. Correct, leak is on the reference leg and this procedure is appropriate.
- Utility comment: Need to make "A " more wrong.

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6. 015/017AG2.4.4 001

- Unit 1 is at 100% Power.
- RCS Pressure is 2135 psig.
- 1B1 RCP indications:
  - Seal leakage flow is .09 gpm
  - Seal return temperature is 168 °F and stable.
  - Upper and Lower Oil Pot level is - .25" and steady
  - Upper Guide bearing is 185 °F and slowly increasing.
  - Lower Guide bearing is 175 °F and slowly increasing.
  - Radial bearing temperature is 227 °F
  - Seal Return temperature is 225 °F
  - Lower Cavity pressure is 2035 and increasing

Which ONE of the following describes the actions that are required to be taken based on the above conditions?

- A. Reduce reactor power to 65% using Enclosure 5.2 "Rapid power Reduction" of AP/1/A/1700/016 "Abnormal Reactor Coolant Pump Operation", secure the 1B1 RCP within 8 hours, and close 1HP-232 (1B1 Seal Return Stop Valve).
- B. Reduce reactor power to 65% using Enclosure 5.2 "Rapid power Reduction" of AP/1/A/1700/016 "Abnormal Reactor Coolant Pump Operation", then trip 1B1 RCP within 100 hours.
- C. Immediately reduce reactor power to <70% using AP/1/A/1700/029 "Rapid Unit Shutdown", then immediately trip 1B1 RCP.
- D. Immediately Trip the reactor and secure 1B1 RCP in accordance with Enclosure 5.1 "Immediate Trip Criteria" of AP/1/A/1700/016 "Abnormal Reactor Coolant Pump Operation", then enter the EOP and the perform IMAs and SAs.



**QUESTIONS REPORT**  
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Oconee Bank Question PNSPNS061602. Modified slightly to include procedures entered. Changed the reason for immediate RCP Trip NEED TO VERIFY CORRECT VALVE IN DISTRACTOR A.

Why is closing 1HP-232 (228 in original) in the question? all steps in procedure direct opening this valve.

- A. Incorrect, immediate trip criteria are met.
- B. Incorrect, immediate trip criteria are met.
- C. Incorrect, immediate trip criteria are met.
- D. Correct, seal return temperature is at the immediate trip criteria level.

K/A: 015/017AG2.4.4 RCP Malfunctions Ability to recognize abnormal indications for system operating parameters which are entry level conditions for emergency and abnormal operating procedures. (4.0/4.3)

**QUESTIONS REPORT**  
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7. 017A2.02 001

- Unit 1 had a SBLOCA
- 1.5 hours have elapsed since the start of the event.
- CETC's indicate 1239°F and are slowly rising
- Self-Powered Neutron Detector Chart recorders are spiking full scale.
- EOP ICC TAB is in progress

Which ONE of the following describes the parameter that indicates that core damage may have occurred and the actions that are required to be taken?

- A. CETCs readings; notify the TSC to enter the OSAGs.
- B. CETCs readings; raise S/G Levels to the point of spilling into the MS lines.
- C. Self-Powered Neutron Detector Chart recorders spiking full scale; notify the TSC to enter the OSAGs.
- D. Self-Powered Neutron Detector Chart recorders spiking full scale; raise S/G Levels to the point of spilling into the MS lines.

New Question developed from Oconee bank questions TA020201 (789) and EOP 100901 (194). Objective 8 and 10 of OP-OC-EOP-ICC, and Lesson Plan OP-OC-TA-AM3.

- A. Correct, Core damage can be assessed by CETCs and the TSC must be operable by this point in the event so this is the correct transition.
- B. Incorrect, Core damage can be assessed by CETCs , this is the correct action to take if the TSC was not operational.
- C. Incorrect, SPNDs are not used alone to asses core damage , this is the correct action to take.
- D. Incorrect, SPNDs are not used alone to asses core damage, this is the correct action to take if the TSC was not operational.

K/A: 017A2.02 Ability to (a) predict the impacts of the following on the In Core Temperature Monitoring System and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: **Core Damage**. (3.6/4.1)

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

8. 022A2.01 001

- Unit 1 is operating at 100% power.
- 1A RBS pump is tagged out for a seal replacement. LCO3.6.5 (Reactor Building Spray and Cooling) Condition A entered.
- A& B RBCUs are running in high speed.
- While attempting to start 1C RBCU in High speed the fan experiences an overcurrent trip as soon as it is started.

Which ONE of the following describes the effect that an overcurrent trip of 1C RBCU would have on plant status and what action is required?

- A. Required Fans/Spray for ESF function are not met. Return either the 1A RBS pump or the 1C RBCU to operable status within 7 days, or be in mode 3 within 12 hours.
- B. Required Fans/Spray for ESF function are not met. Return either the 1A RBS pump or the 1C RBCU to operable status within 24 hours, or be in mode 3 within 12 hours.
- C. 1C RBCU in slow speed is still operable. Return 1A RBS pump to operable status within 7 days, or be in mode 3 within 12 hours.
- D. 1C RBCU in slow speed is still operable. Return either 1A RBS pump or the 1C fast speed RBCU to operable status within 24 hours, or be in mode 3 within 12 hours.

New Question developed to match K/A. Reference TS 3.6.5 required. (TS only not Bases). Lesson Plan OP-OC-PNS-RBC objective #s 17 and 18.

- A. Incorrect, first part is correct, either 1A RBS or 1C RBCU must be returned to service within 24 hours.
- B. Correct, the ESF functions are not met, three trains of RBCUs are required along with two trains of RB spray, this is the correct actions IAW TS 3.6.5 action "C".
- C. Incorrect, if the applicant believes that the because the RBCU was started in high speed that it is still operable in slow speed (fans actually energizes slow speed windings first, then high speed, the pump tripping immediately indicates a problem with the slow speed winding.
- D. Incorrect. Same as C.

K/A: 022A2.01: Ability to (a) predict the impacts of the following on the (Containment Cooling System) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation. (2.5/2.7)

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

9. 027AA2.04 001

Unit 2 Plant Conditions:

- Reactor Power is 100%
- RCS Controlling NR pressure signal fails low.

Which ONE of the following correctly describes the effect this will have on the plant?

**ASSUME NO OPERATOR ACTIONS**

- A. The PORV is inoperable; immediate entry in TS 3.0.3 is required.
- B. The PORV is inoperable; TS entry is required until I&E selects an alternate RCS pressure instrument.
- C. RCS pressure will increase; PZR code relief valves will prevent exceeding the TS Safety limit.
- D. RCS pressure will increase; PZR PORV will prevent exceeding the TS Safety limit.

New question developed to match K/A by Utility.

- A. Incorrect, PORV is inoperable. PORV is not required by TS.
- B. Incorrect, PORV is inoperable. PORV is not required by TS.
- C. Correct, pressurizer heaters will fail on and spray will be inoperable, this will cause RCS pressure to increase up to the RPS trip setpoint. The reactor will Trip, pressure will then increase again up to the code safety relief setpoint.
- D. Incorrect, PORV will not open its signal is failed low.

K/A: 027AA2.17 - Ability to determine and interpret the following as they apply to Pressurizer Control Malfunction TS limits for RCS pressure.

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

10. 041G2.1.32 001

- Unit 1 is reducing power to enter a refueling outage.
- Turbine Load is approaching 150 MWE, using OP/1/A/1106/001 Enclosure 4.2 "Turbine Generator Shutdown".

Which ONE of the following describes the actions that are to be taken at this point in the shutdown and the basis for those actions?

- A. Reduce the rate of load reduction to < 5%/min to reduce high exhaust hood spray temperatures.
- B. Reduce the rate of load reduction to < 5%/min to allow the TBVs time to begin to control turbine header pressure.
- C. Reduce the rate of load reduction to limit the rate of change of turbine first stage temperature to < 150°F/HR.
- D. Reduce the rate of load reduction to limit First Stage Shell Inner and Outer Metal Temperature delta T to less than 75°F.

Modified Oconee bank question STG010102 to make it an SRO question. Reference OP/1/A/1106/001 precautions and limitations. Lesson Plan OP-OC-STG-015 objective # 1.

- A. Incorrect, this is the correct rate of load reduction, but it will not reduce high exhaust hood spray temperatures.
- B. Correct, this is the correct rate of load reduction, and allows the TBVs time to begin to control Turbine header pressure.
- C. Incorrect, this is a startup (rolling up the turbine limit).
- D. Incorrect, this is a startup (rolling up the turbine limit).

K/A: 041G2.1.32 Turbine Bypass Control: Ability to explain all system precautions and limitations. (3.4/3.8)

Utility had no comments.

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

11. 058AA2.03 001

- Unit 2 is operating at 100% power.
- The input breaker for 2DP MCC opens due to an electrical fault.

Which ONE of the following describes the effect that this will have on unit operation?

- A. The TDEFW pump has lost its autostart capability, declare the TDEFW pump inoperable and enter TS 3.7.5 "Emergency Feedwater (EFW) System".
- B. # 1 Keowee Hydro Unit has lost Unit Control Circuitry and Relaying Power,, declare the hydro unit inoperable and enter TS 3.8.1 "AC Sources-Operating".
- C. The Power Battery System is inoperable, enter SLC 16.8.3 "Power Battery Parameters".
- D. CRD Breaker control power has been lost, declare the ATWS system inoperable and enter SLC 16.7.2 "Anticipated Transient Without Scram".

New question developed to match K/A. Used bank question CF021301 for guidance. Lesson plan OP-OC-EL-DCD pages 35 to 39, Objective #7.

- A. Correct, if DC power from 1DP motor control center is lost the TDEFWP would not auto start due to the auxiliary oil pump not having power, this is the correct TS to enter.
- B. Incorrect, Hydro Unit control power is from Keowee DC power and is not effected by a loss of 1DP, this is the correct TS to enter if the unit was inoperable.
- C. Incorrect, Two batteries would have to be inoperable to declare the Power battery System inoperable, this is the correct SLC to enter if it were inoperable.
- D. Incorrect CRD Breaker control is from Vital DC and would not be affected, this is the correct SLC for the ATWS system.

K/A 058AA2.03 Ability to determine and interpret the following as they apply to the Loss of DC power: DC loads lost; impact on ability to operate and monitor plant systems. (3.5/3.9)

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

12. 059G2.1.23 001

- Unit 1 Reactor Power is 100%.
- Both Main FWDPTs stop valves indicate GREEN.
- The Reactor did not trip automatically or manually.
- The Main Turbine did not trip automatically.

Which ONE of the following describes what action should be taken concerning the main turbine and why?

- A. As soon as Reactor power is less than 5%, trip the main turbine to ensure on site AC electrical power is transferred to a more reliable source.
- B. As soon as Reactor power is less than 5%, trip the main turbine to prevent damage to the turbine generator from being motorized.
- C. Trip the main turbine immediately to minimize the chance of an overcooling event adding additional positive reactivity to the core?
- D. Trip the main turbine immediately to allow RCS temperature to rise adding negative reactivity to the core?

Oconee Bank Question EAP110501. Lesson Plan OP-OC-EAP-UNPP objective # 6. The indications of the stop valves being green indicate that the feedwater pumps are tripped, initiating a loss of main feed.

- A. Incorrect, Tripping the MT does not by itself ensure a swap to a reliable AC power source. By tripping the MT, you are relying on the interlocks to work correctly. A manual transfer of auxiliaries will ensure a swap to a reliable source of AC power.
- B. Incorrect, The turbine generator is designed to handle being motorized and this is not why the turbine is tripped when less than 5%.
- C. Incorrect, Tripping the main turbine if reactor power is greater than 5% does not prevent an overcooling event from adding positive reactivity. When the reactor is shutdown and the turbine is still operating an overcooling event could occur.
- D. Correct the tripping of the MT in coincidence with the loss of MFW will allow the RCS to heatup and the doppler and moderator coefficients to add negative reactivity which will aid in shutting the reactor down.

K/A:Main Feedwater: Ability to perform specific and integrated plant procedures during all modes of plant operation. (3.9/4.0)

Utility had no comments, asked them to review question history to make sure it is not a repeat from last two exams.

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

13. 062AG2.4.50 001

Unit 1 is at 100%

Unit 2 is at 100%

Unit 3 Plant Conditions:

- Mode 5
- 3A LPSW is tagged out for bearing replacement
- Annunciator 3SA-09 "LPSW HEADER A/B PRESSURE LOW is in alarm

Which ONE of the following describes the actions that are required to be taken to mitigate the above conditions?

- A. Verify that the standby LPSW pump started; refer to AP/26 "Loss of Decay Heat Removal" to restore LPSW system operation to normal.
- B. Verify that the standby LPSW pump started; refer to AP/24 "Loss of LPSW" and cross connect Unit 1&2 LPSW system with Unit 3.
- C. Refer to AP/26 "Loss of Decay Heat Removal" and cross connect the LPSW system with the HPSW system.
- D. Refer to AP/24, "Loss of LPSW" and cross connect Unit 1&2 LPSW system with Unit 3 and start an additional Unit 1&2 LPSW pump.

Slightly Modified Bank Question SSS051503.

- A. Incorrect, there is not a standby pump available, and AP/24 is required to be entered, AP/26 Loss of DHR does not provide the actions to deal with a loss of LPSW.
- B. Incorrect, no standby pump available, correct procedure, but additional pumps are required.
- C. Incorrect, wrong procedure, LPSW and HPSW not cross connected by procedure.
- D. Correct, correct procedure and it is required for another pump to be started to ensure cooling.

K/A: 062AG2.4.50 Ability to verify system alarm setpoints and operate control identified in the alarm response manual.



**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

14. 062G2.1.23 001

Unit 1 Plant Conditions:

- Reactor Power 100%
- ACB-3 Closed

Current Conditions:

- Switchyard Isolation.
- Keowee Unit 1 emergency locked out.
- ACB-2 will not close.
- Immediate Manual Actions are being performed.

Which ONE of the following correctly describes ALL the required actions of the SRO?

- A. Go to Subsequent Actions and then initiate Enclosure 5.38 "Restoration of Power"
- B. Initiate AP/11 "Recovery from Loss of Power" and then complete Subsequent Actions.
- C. Go to Subsequent Actions and then transfer to the Blackout TAB.
- D. Initiate AP/25 "SSF EOP" and then parallel action transfer to the Blackout TAB.

**Question developed by Utility believed to be bank.**

- A. Incorrect, Enclosure 5.38 will be initiated from the Blackout Tab and AP/25 must be initiated.
- B. Incorrect, if power had returned with a Keowee Unit this would be correct.
- C. Incorrect, this is correct except AP/25 must be initiated.
- D. Correct, a blackout has occurred. IMA will require initiating AP/25 due to the loss of HPI and CC. After IMAs are complete transfer to the Blackout TAB is required.

K/A: 062G2.1.23 AC Electrical Distribution System - Ability to perform specific system and intergrated plant procedures during all modes of plant operation. (3.9/4.0)

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

15. 076AG2.1.34 001

Unit 2 Plant Conditions:

Time = 0800

- Reactor Power 100%.
- Group 6 Rod 4 drops into the core.

Time = 2000

- Reactor Power 55%
- RIA-47 and 49 show a small increase in counts

Which ONE of the following describes an indication that the transient caused some fission products to be released into the RCS?

- A. An Increase in Cobalt-58 and Cobalt-60 activity above equilibrium values.
- B. An Increase in Tritium, Xenon-133, Iodine-131, and Cesium-137 above equilibrium values.
- C. An increase in Chromium-51, Iron-59, and Cadmium-115 above equilibrium values.
- D. Chemistry reports a small decrease in the calculated E-bar value.

Bank Question CH030501

- A. Incorrect, these are activation products, a crud burst would cause these indicators to increase.
- B. Correct, these are some of the radionuclides that would show an increase if there were leaks in the fuel.
- C. Incorrect, these are other activation/corrosion products.
- D. Incorrect, E-bar would increase not decrease if fuel leaks occurred.

K/A: 076G2.1.34. High RCS activity: ability to maintain primary and secondary plant chemistry with allowable limits. (2.3/2.9)

## QUESTIONS REPORT

for Oconee SRO 2005-301 Draft Questions

16. BA01AG2.2.22 001

- Unit 2 was at 100% power.
- Control Rod group 6 rod 1 has dropped into the core.
- The OAC and PI panel indicate the rod is at 0%.
- Power was stabilized at 60% power after the runback
- Group 7 Rods are at 30% withdrawn.

Which ONE of the following describes all of the actions required for the above conditions?

- A. Restore group 7 rods to at least 45% withdrawn within two hours.
- B. Begin a boration within 15 minutes and restore group 7 rods to at least 45%
- C. Within 2 hours reduce thermal power to less than or equal to 47%.
- D. No Actions are required rod position is in the acceptable region.

Bank questions B582 and 579. Technical Specifications and COLR graphs.  
Reference COLR graphs to determine if regulating rod position is acceptable.

- A. Incorrect, with the regulating rods in the unacceptable region a boration is required.
- B. Correct, T/S 3.2.1 states that if regulating rod groups are positioned in restricted or unacceptable region to initiate a boration in 15 min. and restore rod position within two hours.
- C. Incorrect, A boration is required.
- D. Incorrect, A boration is required.

K/A: BA01AG 2.2.22 Knowledge of limiting conditions for operations and safety limits:  
Plant Runback (3.4/4.1)  
Utility requested that TS also be allowed. Did not want to allow this < 1hr action required.

**QUESTIONS REPORT**  
for Oconee SRO 2005-301 Draft Questions

17. BA07AA2.2 001

- AP/30 "Auxiliary Building flood" is in progress.
- An NEO at the site of flooding reports to the Control Room that "The Flooding has stopped".

Which ONE of the following describes the actions the SRO is required to direct in accordance with AP/30 "Auxiliary Building flood"?

- A. Stop AP/30 performance immediately, take actions to immediately restore previously isolated non-leaking systems.
- B. Stop AP/30 performance immediately, take no further actions, wait for the WCC/TSC to determine recovery plan.
- C. Complete all remaining steps in the appropriate section then exit AP/30.
- D. Complete the remaining steps to completely isolate the system discovered to be leaking, then exit AP/30

Oconee Bank Question EAP213004 SRO only.

- A. Incorrect, if at any time the leak is stopped, then stop and immediately allow the WCC/TSC to determine a recovery plan.
- B. Correct, the leak has stopped so AP/30 should be stopped and the WCC/TSC should determine a recovery plan.
- C. Incorrect, if at any time the leak is stopped, then stop and immediately allow the WCC/TSC to determine a recovery plan.
- D. Incorrect, if at any time the leak is stopped, then stop and immediately allow the WCC/TSC to determine a recovery plan.

K/A: BA07AA2.2 Ability to determine and interpret the following as they apply to the (Flooding); adherence to appropriate procedures and operation within the limitations in the facility's License and Amendments.

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18. BE08EA2.1 001

- Unit 2 Reactor Trip Occurred from 100% power.
- ES 1 and 2 actuation has occurred.
- RCS Pressure is stable at 1400 psig.
- Pressurizer level is 0"
- RCS Temperature is 540°F
- A OTSG pressure 980 psig
- B OTSG pressure 990 psig

Based on the above conditions which ONE of the following procedure flowpaths would be used to mitigate plant conditions upon completion of IMAs and SAs?

- A. Enclosure 5.1, and EP/2/A/1800/001 "Post Loca Cooldown"
- B. EP/2/A/1800/001 D "LOSCM TAB" and EP/2/A/1800/001 "HPI Cooldown"
- C. Enclosure 5.1 and EP/2/A/1800/001 "LOSCM TAB"
- D. EP/2/A/1800/001 F "EHT TAB" and EP/2/A/1800/001 "HPI Cooldown"

New Question developed from K/A. OP-OC-EAP-LCD objective T1 and E3 and 4

- A. Correct, A SBLOCA is occurring, and a post loca cooldown is required.
- B. Incorrect, Subcooling has not been lost, and once through cooling is not required.
- C. Incorrect, first part correct, but a lost of subcooling has not occurred.
- D. Incorrect, an excessive heat transfer event is not in progress, and once through cooling is not required.

K/A BE08EA2.1 Ability to determine and interpret the following as they apply to (LOCA Cooldown-dep) Facility conditions and selection of appropriate procedures during abnormal and emergency operations. (2.8/4.2)

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19. G2.1.32 001

- Heatup is in progress on Unit 1
- RCS Temperature is 89 °F
- The CC system startup is in progress per OP/1104/08, Component Cooling System
- A Limit and Precaution in OP/1/A/1104/08 states the CC system must be in operation prior to 190 °F in the RCS.

Which ONE of the following describes the basis for this Limit and Precaution?

- A. Protects purification IX resin from overheating
- B. Prevents water hammer in the letdown coolers
- C. Prevents overheating of RCP seals
- D. Prevents damage to the CRD Stators from overheating

Bank 451 Moved to RO Exam. (Not considered to be SRO Only).

- A. Incorrect, The high temperature interlock of HP-5 performs this function.
- B. Incorrect, CC is established to the LD coolers when RCS temperature is > 120 °F and letdown is established.
- C. Incorrect, CC is required to the Thermal Barrier but it is not based on 190 °F.
- D. Correct The CRD are protected by ensuring the CC system is providing cooling prior to the RCS heating up to > 190 °F.

K/A G2.1.32 Ability to explain and apply all system limits and precautions. (3.4/3.8)

**QUESTIONS REPORT**  
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20. G2.1.4 001

- All Units are at 100% Power
- Unit I "A" HPI pump has been inoperable for 80 hours
- An NLO/NEO is Designated as the Fire Brigade Leader, due to an SRO not being available
- No other groups have extra individuals available to stand a fire brigade position

Which ONE of the following describes the minimum number of NLOs/NEOs required to meet shift manning requirements in accordance with SLC 16.13.1 for the above plant conditions?

- A. 8
- B. 9
- C. 10
- D. 11

**Discuss References**

New Question developed from Oconee ADM010401 Station Staffing Requirements.

- A. Incorrect, this is the number of NLOs required for normal shift complement with all Units at 100 % power.
- B. Incorrect, this is the number of NLOs required for normal shift complement with all Units at 100 % power, and having an NLO designated as the Fire Brigade leader.
- C. Incorrect, this is the number of NLOs required for normal shift complement with all Units at 100 % power, and having 2 NLOs for being in TS 3.5.2 condition B.
- D. Correct, This is the total number of NLOs required for being in TS 3.5.2 and having an NLO designated as the Fire Brigade Leader.

K/A G2.1.4 Knowledge of Shift Staffing Requirements (2.3/3.4)

Utility requested references to be provided. Agreed to provide SLC 16.13.1.

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21. G2.2.11 001

- A PT is in Progress on the midnight shift to return to service a TS piece of equipment, that must be completed prior to day shift.
- The operator performing the task informs you (the Relief OSM) that the PT can not be completed as written.
- After reviewing the procedure you concur that the procedure must be changed.

Which ONE of the following describes the process that must be followed to change the procedure and who can approve the change.

- A. Changes to procedures can be made in accordance with OMP 1-09 using the Temporary change section, and can be approved by the Relief OSM.
- B. Changes to procedures can be made in accordance with OMP 1-09 using the Minor change section, and can be approved by the Relief OSM.
- C. Changes to procedures can be made in accordance with OMP 1-09 using the Temporary change section, and a phone call must be made to get approval from the Superintendent of operations.
- D. Changes to procedures can be made in accordance with OMP 1-09 Using the Minor change section, and a phone call must be made to get approval from the Superintendent of operations

Question developed using OMP-1-9 Administrative Control of operations procedures.

- A. Incorrect, the Relief OSM can not approve the procedure and the temporary change section has been discontinued.
- B. Incorrect, correct procedure section but the Relief OSM can not approve the procedure.
- C. Incorrect, wrong section correct approval.
- D. Correct, right section and approval.

K/A: G 2.2.11 Knowledge of the process for controlling temporary changes. (2.5/3.4)



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22. G2.2.26 001

- Refueling is in progress on Unit 1.
- A new fuel assembly must be placed in an alternate core location.

Which ONE of the following describes who must evaluate the alternate location and who must approve the fuel assembly move.

- A. A Qualified Reactor Engineer must evaluate the location, and the OSM must approve the move.
- B. Operations Shift Manager must evaluate the location, and the refueling SRO must approve the move.
- C. A Qualified Reactor Engineer must evaluate the location, and the refueling SRO must approve the move.
- D. Operations Shift Manager must evaluate the location and a qualified Reactor Engineer must approve the move.

Modified Oconee Bank Question FH043601. Referenced NSD 304 section 304.6.6.1 #5.

- A. Incorrect, the refueling SRO must approve all fuel moves.
- B. Incorrect, the Qualified Reactor Engineer must evaluate the location.
- C. Correct, a Qualified Reactor Engineer must evaluate the location, and the refueling SRO must approve all fuel moves.
- D. Incorrect, A qualified Reactor Engineer must evaluate the location and the refueling SRO must approve all fuel moves.

K/A: G2.2.26 Knowledge of refueling administrative requirements. (2.5/3.7)  
Utility has no comments.

**QUESTIONS REPORT**  
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23. G2.3.4 001

- A plant emergency is in progress requiring a high does exposure.
- An individual is injured and an operator has volunteered to perform a rescue.
- The individual has had the required extensions and has accumulated the following doses:
  - Committed Dose Equivalent (CDE) is 450 mr (Thyroid)
  - Shallow Dose Equivalent (SDE) is 350 mr
  - Deep Dose Equivalent (DDE) is 2350 mr
  - Committed Effective Dose Equivalent (CEDE) is 50 mr.
  - Lens Dose Equivalent is (LDE) 400 mr.

Which ONE of the following correctly describes the individuals Total Effective Dose Equivalent (TEDE) and how much total dose will the volunteer be allowed to receive?

- A. 2.4 rem /10 rem
- B. 2.8 rem / 10 rem
- C. 2.4 rem / 25 rem
- D. 2.8 rem / 25 rem

**Need to verify Oconee Limits for this**

Modified Oconee bank question RAD022501 (42).

- A. Incorrect, correct dose, limit is for saving a piece of equipment.
- B. Incorrect, incorrect dose, limit is for saving a piece of equipment.
- C. Correct, correct dose and limit.
- D. Incorrect, incorrect dose, correct limit

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24. G2.4.36 001

Unit 2 Conditions are as follows:

- Reactor Tripped, ES1-8 Actuators have occurred.
- "A" OTSG pressure 300 psig.
- "B" OTSG pressure 280 psig.
- BWST Level 17.5'

Which ONE of the following is the correct action for the SRO to direct in accordance with the EOP for the current conditions?

- A. Notify RP to survey both MS lines for radiation.
- B. Notify RP and Chemistry to check for indications of a SGTR.
- C. Notify Chemistry to commence caustic addition.
- D. Notify Chemistry to sample RCS boron concentration hourly.

New question developed to match K/A. Referenced EP/2/A/1800/001 Enclosure 5.1. Question Sat Utility requested change from EOP/2/A... to just IAW the EOP. comment accepted.

- A. Incorrect, SG pressures are low due to the LOCA.
- B. Incorrect, SG pressures are low due to the LOCA, but this is not indicative of a SGTR.
- C. Correct, with BWST level at 17.5' Enclosure 5.12 will be implemented and it directs that chemistry be notified to add caustic.
- D. With a large break LOCA in progress a RCS boron concentration will not be able to be taken every hour this is performed for a TBF.

K/A: G2.4.36 Knowledge of chemistry/health physics tasks during emergency operations. (2.0/2.8)

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25. G2.4.38 001

- An Emergency has been declared on Unit 1
- The Station Manager is not on site.
- The OSM is performing the duties of the Emergency Coordinator.
- The OSC, TSC, and EOF are not staffed.

Which ONE of the following duties can the OSM delegate to another individual on site?

- A. Recommending Protective Action guides for the protection of the public.
- B. Classify the Emergency Event
- C. Escalate or de-escalate or terminate an Emergency event if the EOF is not operational.
- D. Authorize Exposures in excess of routine yearly exposure limits for equipment repair missions.

Reference Figure B-5 Oconee Emergency Plan.

- A. Incorrect, this may not be delegated.
- B. Incorrect, this may not be delegated.
- C. Incorrect, this may be delegated only if the EOF is operational.
- D. Correct, the RP manager can authorize exposures in excess of routine yearly exposure limits from the OSC.