

# TECH SPECS BONUS QUESTIONS

PROBLEM STATEMENTS

# FOR ANY T/S RELATED PROBLEM

- Review TOC for potential LCO(s)
- Review applicability of LCO(s)
- Review LCO bases
- Review SR's and bases
- Apply definitions (ALL CAPS)
- Apply T/S motherhood statements
- Identify the required actions

Given the following plant conditions, evaluate technical specifications for compliance and any required actions that may result:

- Rated core flow is 77 million lbm per hour
- Current core flow 60 million lbm per hour
- 'A' loop jet pump total flow is 32 million lbm per hour
- 'B' loop jet pump total flow is 28 million lbm per hour

While operating at 100% CTP, #1 BPV experiences a mechanical failure and fully opens. Repairs cannot be completed for several days. The most time restrictive applicable Technical Specification requires:

- A. A power reduction to  $< 25\%$  RTP within 4 hours per 3.7.7 Condition B.
- B. APLHGR and MCPR limits be adjusted for an inoperable Turbine Bypass System per LCO 3.7.7 within 2 hours.
- C. Restore TSV Closure and TCV Fast Closure RPS Trip Capability within 1 hour per 3.3.1.1 Condition C.
- D. No restrictions because the bypass system is only inoperable if the valves cannot be opened.

After a short (3 day) outage, reactor startup preparations are in progress with the Reactor Mode Switch in Shutdown and Reactor Coolant temperature at 150 degrees F. All control rods are full in. A surveillance test on the IRM's directs the operator to place the Reactor Mode Switch in Startup to test part of the IRM logic. What mode is the reactor in during the time that the Reactor Mode Switch is in Startup.

- A. Mode 1
- B. Mode 2
- C. Mode 3
- D. Mode 4

The plant is currently shutdown with the A loop of RHR operating in the SDC Mode using the 'C' RHR pump.

- The reactor mode switch is in SHUTDOWN
- Reactor coolant temperature is 250 degrees F.
- Reactor pressure is 45 psig
- HPCI is isolated on low steam supply pressure.
- Both reactor recirculation pumps are shutdown
- The 'B' loop of RHR is tagged out for pump seal replacement on both pumps. Maintenance has started.

What LCO Conditions, if any, should be entered?

Due to an administrative error, a quarterly surveillance was found to be overdue by one month. What actions are required?

What if it was only overdue by a week?

While operating in Mode 1, a required surveillance is found NEVER to have been performed and the plant must be in Mode 4 to perform. What are the required actions?



While operating in Mode 1 and the 'C' RHR pump tagged out for maintenance, a short circuit causes a loss of the 'A' RHR pump. What are the applicable LCO Conditions?

While operating in Mode 1, a 10CFR-21 non-compliance issue has resulted in all of the IRM's being declared inoperable. What are the applicable LCO Conditions.

With all of the IRM's inoperable and other plant conditions requiring a plant shutdown per LCO-3.0.3, how should the operators proceed?

Now, back to the original question:

While operating in Mode 1, a 10CFR-21 non-compliance issue has resulted in all of the IRM's being declared inoperable.

What Mode 1 required scram function has been lost?