

Clinton 2021 Initial License Exam Outline Review Comments

Simulator Scenario Outline Comments

- **NRC:** In scenario 1, event 7 a reactivity event for the ATC has the operators begin a rapid shutdown and then eventually scram the plant. It is not clear what will cause the crew to change their approach or why they will not just decide to scram without performing the reactivity maneuver. Manually scrambling the reactor in and of itself would not count as a reactivity maneuver for the ATC.

Facility: The crew is directed to perform a rapid plant shutdown per CPS 3208.01 step 8.3.1.3 and 4 if CY pumps are lost and cannot be restored. The rapid plant shutdown procedure dictates using the RR flow control valves to lower power to 43 mlbm/hr prior to placing the Mode Switch in Shutdown. Performing a reactor scram immediately would deviate from the procedure guidance.

- **NRC:** ES 301-5s do not account for the component failure assigned to the BOP for the LPCS pump/valve failure in scenario 1, event 9. This event would not count as an abnormal event in accordance with 301-4 because it occurs after the major event, but it is still a component failure which should be accounted for the BOP and SRO on the 301-5s.

Facility: There is a high probability the BOP will perform this action. Agree with NRC and change made.

- **NRC:** In scenario 1, CT-2 requires maximizing injection to restore RPV level > TAF. This philosophy will need to be specifically defined somewhere in the D-2 or in the CT statement itself (e.g. some sites analyze the CTs and how they meet the 4 qualities discussed in the NUREG 1021, Appendix D. as support material in the D-2).

Facility: The basis for this CT is given in the scenario lesson plan. Add this page to the ES-D-1 and submit with outlines in the future. The CT was clarified to specify injecting with LPCS as the means for maximizing injection.

- **NRC:** In scenario 2, CT-2 requires the applicants to place the Mode switch is SHUTDOWN within 1 minute of the second RR pump tripping. This is an interesting CT worthy of discussion as this action results in an ATWS (scram was not completely successful). Since all but two rods fully insert significantly reducing power making it easy for the crew to get APRMs downscale with subsequent actions. Typically, the required actions of a CT provide a result that is fully successful, but in this instance, it will be mostly successful. In addition, please provide a justification for the 1-minute action time.

Facility: This is no longer a critical task in the scenario. Updated scenario to make reducing power following a RR pump trip a CT.

Clinton 2021 Initial License Exam Outline Review Comments

- **NRC:** In scenario 2, CT-4 is associated with ATWS actions to inhibit ADS before reaching level 1. Concurrent with these actions, operators are addressing a steam leak in the plant which will drive them to a blowdown due to 2 areas exceeding max safe. There is no CT associated with performing this blowdown, I expect there should be. With only two rods out of the core, RPV level will not need to be significantly lowered to bring power below the APRM downscale value and therefore, will inhibiting ADS actually be critical in this scenario?

Facility: Removed this CT.

- **NRC:** In scenario 4, CT-1 requires SBLC be started within 120 seconds of RPV pressure exceeding the ATWS setpoint. What is the basis for this time requirement?

Facility: The time being assessed is the longer time between 120 seconds following the ATWS trip point or the time at which the suppression pool reaches Boron Injection Initiation Temperature (BIIT). Based on EPU Task Report T0902, no scenario with an ATWS involves reaching BIIT in a time longer than 120 seconds from ATWS trip point, therefore 120 seconds is the longest time to be used. The Boron Injection Temperature is a function of reactor power. If boron injection is initiated before suppression pool temperature reaches the Boron Injection Temperature, RPV blowdown may be precluded at lower power levels and is therefore critical.

- **NRC:** In scenario 4, CT-4 requires RPV level to be maintained between TAF and -60 inches. What is the grading criterion for this action? Within what amount of time or before which parameter is reached must this action be performed by?

Facility: The objective criteria for failure is level falling below TAF, which would challenge the ability to keep the core cooled by submergence. Exceeding -60" would result in a competency hit, but not failure of the CT. The action must be performed prior to reactor water level reaching TAF.

Clinton 2021 Initial License Exam Outline Review Comments

JPM Outline Comments

- **NRC:** GENERAL STATEMENT/REMINDER: JPM Task Standards MUST clearly indicate how the critical steps were identified. For instance, generally stating do something in accordance with a procedure is not adequate as it can be construed that any verifiable action steps done when performing that procedure would be critical.

Facility: No comments.

- **NRC:** Explain why in-plant JPM k is associated with Safety Function 7 Instrumentation. This JPM seems clearly tied to Safety Function 2 Injection Sources.

Facility: Agree. Updated JPM k and ES-301-2 forms.

Written Exam Outline/Audit Exam Outline

- **NRC:** Please provide the audit exam written outline forms for comparison to the NRC written exam outline.

Facility: Sent via email on 10/27/20.