PROPOSED OUTLINE COMMENTS

Facility: PV First Exam Date: October 2019

Written Exam Outline April 8, 2019		
	Comment	**Resolution**
1	NRC Generated, updated by licensee	
2	Licensee rejected 011 K6.04 on loss or malfunction of a PAM instrument on PLCS and stated that this is SRO knowledge. I disagree with this because **RCA-LI-110X** feeds both the controller for level control when selected to X channel but also feeds the RSP "A" and the PAM recorder. You could easily write a question on this KA. Will discuss when send the comments to licensee.	Licensee wrote question on this KA.
3	All other KA changes were reasonable.	

Administrative JPM Outline April 8, 2019		
	Comment	**Resolution**
1	Regarding admin JPMS taken directly from bank, do you have any testing pedigree on them? Have they ever been used on any exam (practice, audit, etc)?	Some but could use improvement.
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Control Room / In-Plant System JPM Outline April 8, 2019		
	Comment	**Resolution**
1	Nice job on topic selections, number of Alt path JPMs, and ability to run some in parallel. Good work.	
2	JPM S2 is on SF3 for pressure control of the RCS. I can't tell by reading the summary but this doesn't appear to be a pressure control type JPM to meet SF3. This JPM looks like an inventory SF1 or	Licensee made changes and outline are Sat.

	a heat removal from core SF4P type JPM.	
3	P1 is the JPM that everyone studied at PV and went straight to the alt path without knowing it was alt path on a previous NRC exam. Also SF 4S has been on three of the last four NRC Exams for the in-plant JPMs so we need to pick a different SF and corresponding JPM. You could due a parallel of CRDM MG sets with volts or current high as alt path, adjustment needed (SF1). Could do a borated water source alignment with a valve failure (SF1), or you could try an instrument air dryer plugging event where App C or App D of 40AO-9ZZ06 has to be performed to restore air pressure. Just some suggestions.	Licensee made changes and outline are Sat.
4	You need to make sure you are testing the 3 different units on the op test, which is really only the in-plant JPMs, so you need to try to have at least one of these JPMs that has differences across the three units on the op test.	Licensee made changes and outline are Sat.
5		

Simulator Scenario Outline Comments April 8, 2019		
	Comment	**Resolution**
1	General comments: 1. The text at the bottom of the CT table needs to use current terminology: “NOTE: (Per NUREG-1021, Appendix D) If an operator or the Crew significantly deviates from or fails to follow procedures that affect the maintenance of basic safety functions, those actions may form the basis of a Critical Task identified in the post-scenario review.” All four scenario guides need these words at the bottom of the CT table. 2. Two normal events in a scenario is too easy (LOD = 1) and does	Licensee made changes and outline are Sat.

	not create enough opportunities for grading on the other competencies. 3. Need more dynamic events that cause the plant to move and operators to respond in order to have all competencies for grading and demonstrate control of the plant during transient events. The "standard pump shift" is no longer considered manual control of an automatic function by the program office so more controller failures are required to evaluate this grading competency. 4. Remove last two items from initial conditions of all four scenarios (not needed). 5. FYI-the ICs should be varied from low power to higher power, which means that you could have a 100%IC, a 50% IC, and a low power IC. Varying the time in core life should also be varied for the scenarios…so a BOC, a MOC, and an EOC IC snap is appropriate as well.	
2	For scenario 1: 1. Start initial conditions with MOC to ensure we are covering BOC/MOC, and EOC conditions 2. For event 1, drop CEA 12 into the core 3. For event 2 htr drain pump trips which requires or causes reactor power cutback. 4. For event 3 leave the same 5. For event 4, MFIV downcomer valve closes inadvertently and won't reopen. 6. Event 5 same 7. Event 6 same 8. Event 7 same, although on D-1 need to have "reactor trip" after the loss of cond vacuum on the D-1 (same line item). 9. All remaining items the same until the end where you need to break something else or cause	Licensee made changes and outline are Sat. After they get all the events together and run them there may be changes to scenarios due to how the events flow, trip risks, etc, but will discuss with CE before changes are made at this point to outlines.

	something else to occur (such as containment valve fails to shut) to put the scenario into a functional recovery procedure. We need two of those in the set. The containment valve would need to be shut to exit the FRP and this creates a third CT.	
3	For scenario 2: 1. Remove 50 gallon dilution event. For event 1 the running makeup pump trips (was event 2) 2. The PZR spray CONTROLLER fails, not an instrument input to it, requires manual operation 3. SG "B" water level instrument fails to 100% open 4. Main Turbine control valve (pick #2 or #3) fails shut, forces crew to do downpower. 5. Loss of non-safety bus that impacts plant equipment 6. Both NC pumps trip, cross tie to EW (CT-1 but not in EOPs so not preferred) 7. Loss of offsite power, 8. Event 8 is SBO temporarily due to breaker fault EDG 'A' has to have breakers manipulated to get it to close on the bus. Also CT-2 to restore power to the 'A' safety bus. 9. Event 9 is AFA-P01 degraded discharge head 10. Event 10 is AFN-P01 seized suction valve. CT-3 is to restore feed flow.	Licensee made changes and outline are Sat. After they get all the events together and run them there may be changes to scenarios due to how the events flow, trip risks, etc, but will discuss with CE before changes are made at this point to outlines.
4	For scenario 3: 1. Event 1 same 2. Event 2 is Control channel NI #1 fails low 3. Event 3 is Steam flow transmitter fails low 4. Event 4 was event 5 5. Charging header DP controller fails in auto 6. SB LOCA 7. CIAS-K relay failures 8. Need a second malfunction here	Licensee made changes and outline are Sat. After they get all the events together and run them there may be changes to scenarios due to how the events flow, trip risks, etc, but will discuss with CE before changes are made at this point to outlines.

5	For scenario 4: Deleted all comments for this scenario since it was the spare and not used (at request of licensee)	Licensee made changes and outline are Sat.