

## DRAFT OUTLINE COMMENTS

Facility:  Palo Verde

First Exam Date:  Nov. 1, 2013 (Written)

<b>Written Exam Outline</b>	
(6/13/13)	
	<b>Comment</b>
<b>Resolution</b>	
1	No comments – NRC generated outline
2	
3	
4	
5	

<b>Administrative JPM Outline</b>	
(6/13/13)	
	<b>Comment</b>
<b>Resolution</b>	
1	No comments
2	
3	
4	
5	

<b>Control Room / In-Plant System JPM Outline</b>	
(6/13/13)	
	<b>Comment</b>
<b>Resolution</b>	
1	No comments
2	
3	
4	
5	

<b>Simulator Scenario Outline Comments</b>	
(6/17/13)	
	<b>Comment</b>
<b>Resolution</b>	
1	Scenario 1 Event 3: SG tube leak – This is listed as a component failure. What are the actions of this failure? Isolation of the S/G? Verifiable actions required to count as component failure. Also, any chance the crew will trip based on the leak rate? If so we should move this
<b>For the SG tube leak in this event, it will require entry into the Excessive RCS Leakrate AOP. The BOP operator will be performing Appendix C, Minimize Release to the Environment, and the ATC operator will be performing Appendix B, ERFDADS Leak Rate Determination. Both</b>	

	event to right before the major so we don't lose the next two failures.	<b>appendices have verifiable actions performed by the respective operators. With a leakrate of this magnitude (~8 gpm), an early reactor trip is highly unlikely as it is not procedurally directed and has not been observed to be directed by past operating crews. Having this event near the beginning of the scenario allows the leakrate determination to be performed making its placement beneficial.</b>
2	Scenario 1 Event 4: Turbine Cooling Water pump trip – Also any chance of crew tripping the turbine and tripping the plant?	<b>For the Turbine Cooling Water (TCW) pump trip, it is highly unlikely that the crew will perform a turbine trip and/or a reactor trip. However, it is even less likely for the crew to perform a reactor trip for the next event (CH B Steam Generator Level Transmitter failure). Because of this, the order of events will be changed to the SG Level Transmitter failure coming BEFORE the TCW pump trip. This will place the TCW pump trip event just before the reactor trip initiating event.</b>
3	Scenario 2 Event 2: Pressurizer spray valve fails open – Any chance of crew allowing pressure to drop to trip setpoint?	<b>The failure described is very slow acting. Only one spray valve fails open which causes a slow and steady pressure drop. It takes minutes before the first alarm (2160 psia) and several minutes after that before reaching an actuation setpoint (1837 psia). Multiple indications will be present for the operator to diagnose the condition (pressurizer heaters, pressurizer spray valve position indication, etc.) prior to receipt of the alarm. Because of these factors, we believe it to be highly improbable for the crew to allow the condition to degrade to an automatic actuation.</b>
4	Scenario 2 Event 6: ESD outside containment – Scenario 1 also contains an ESD. Let's discuss. Potentially using event 9 as the major while coming up with something else to necessitate the trip.	<b>In Scenario 1, the ESD mentioned is a steam rupture outside containment upstream of the MSIVs. It is also coupled with a Steam Generator Tube Leak. This combination requires the crew to perform mitigation strategies in the Functional Recovery Procedure. In Scenario 2, the ESD is on the common header outside containment and is isolated when MSIVs are closed. After discussion, it was verified that these two events require different mitigation strategies and are</b>

		<b>therefore acceptable to be used.</b>
5	Scenario 2 Event 3: Inadvertent initiation of AFW – I think this is a great event especially at low power.	<b>N/A</b>
6	Scenario 2 Event 9: Loss of Grid – Confirm this is Loss of Offsite Power.	<b>This malfunction has been confirmed as being a Loss of Offsite Power.</b>

<b>General Outline Comments</b> (6/13/13)		
	<b>Comment</b>	<b>Resolution</b>
1	What facility document defines the critical tasks in the scenarios?	<b>Currently the Critical Tasks for initial NRC license exams are constructed using NUREG-1021 Appendix D. Where applicable, references such as FSAR, Time Critical Action guidelines, Technical Specifications, and condition of license are used to justify these actions. To the extent possible, the Critical Tasks addressed in the scenario's ES-D-1 will reference these documents as applicable.</b>
2	Need Qualitative Attributes Table added to D-1 of each scenario.	<b>Revision 1 will contain this table for each scenario.</b>
3	Put in expected TS reference(s) into the D-1 as a quick reference for examiners.	<b>Revision 1 will contain this data for each scenario.</b>
4	Scenario 2 is low power scenario (no response required).	<b>N/A</b>