PROPOSED OUTLINE COMMENTS

Facility: CW First Exam Date: Aug 2020

Written Exam Outline		
	Comment	**Resolution**
1	NRC Generated	None – replacement K/As provided by NRC.

Administrative JPM Outline		
	Comment	**Resolution**
1	Rename RO Admin JPMs as A1-A4 and SRO Admins as A5-A9. This is standard R-IV convention.	Completed
2	SRO Admin 3 (A7) – Specify what OSP-EG-P01AC is.	OSP-EG-P01AC CCW TRAIN A PUMP AND VALVE INSERVICE TEST - GROUP A. Its purpose is to demonstrate the Group A operational readiness of train A Component Cooling Water Pumps A and C.
3	The type codes for all JPMs except RO3 say "C, S, R" … they should only say one of these 3 letters. What about RO3 … is it actually intended to be administered in the Simulator?	The intent was to communicate that A1, A2, and A4 (plus A5-A9) could be performed in any setting. The code "C, S, R" was removed and replaced with a "R" except for A3. A3 is to be performed in the simulator as a PPC with the highest level security setting is required which is only available in the simulator.
	JPM A9 replacement Resent the SRO admin outline to explain further.	During validation, issue arose with procedure implementation for PAGs (Protective Action Guidelines) being exceeding in parallel with a wind shift. A member of EP was signed onto exam security. Answer - The PAR procedure is written a certain way for county implementation for only 1 item at a time, not the combined wind shift and PAGs being exceeded simultaneously. It was not a discriminating tool as no one passed it during validation. NEW A9 JPM – same K/A and task – new set of events that makes the event rapidly progressing requiring a PAR different from the Default PAR.

Control Room / In-Plant System JPM Outline

	Comment	Resolution
1	Combine ES-301-2 into a single outline that designates which JPMs are SRO-U and which one is RO only.	Completed. JPMs are denoted with either "ALL Applicants", "RO & SRO-I ONLY" or "RO ONLY" to specific JPMS for each type of applicant.
2	Summarize actual quantitative attributes for each license type in table at bottom of 301-2. Should be able to see what the total is relative to the requirements.	Completed. A new column was added to the right of the requirements summarizing the quantitative attributes for each license type
3	P-1 is also “L” low-power/shutdown.	Completed – added a L to P1's attributes
4	Rename Sim1-8 as S1-S8	Completed
5	Wherever a procedure is referenced, i.e OTN-EM-00001, specify what the noun name of the procedure is.	Completed. Added several Procedure titles in the combined ES 301-2.

Simulator Scenario Outline Comments

	Comment	Resolution
	GENERIC: Under event type instead of writing SRO(I) RO (I) BOP (I) write “I (CRS, ATC, BOP)”	Completed
	Events that have TS calls in them should have an event type label as “TS(SRO)”	Completed
	In CT explanations, label them as CT-1 CT-2 and CT-3.	Completed
	Scenario 1	
1	Events that have TS calls in them should have an event type label as “TS(SRO)”	Moved to generic section (above) for ease of tracking for each scenario
2	GENERIC: Under event type instead of writing SRO(I) RO (I) BOP (I) write “I (CRS, ATC, BOP)”	Moved to generic section (above) for ease of tracking for each scenario
3	Swap order of events 6 and 7.	completed
4	Split out “ A' SI pump autostart failure,” as a separate event from Event 7	After swapping events 6 & 7, this event was split out of the new 6 and made event #8. CT-2 was moved with this event. In general, events 6 – 8 were reorganized.
5	If the crew has to transition to ECA-1.1 that counts as an EOP contingency procedure entered if we let them take a substantive action.	ECA-1.1, Step #3 and #4 Reset SI and RWST SI Switchover and the scenario can be terminated at any point after those actions to count it for an EOP contingency. Scenario quantitative attributes were changed from 0 to 1. The scenario event description was also updated.

6	In CT explanations, label them as CT-1 CT-2 and CT-3.	Moved to generic section (above) for ease of tracking for each scenario
7	For manually actuating SI, since train B cannot be a success path, believe the requirement should be that they have to actuate Train A.	As the 'A' SI pump is the success path, CT-2 was reworded to "Establish flow from the 'A' SI pump". CT-3 wording was changed to "Manually actuate 'A' Train SI".
8	Justify how the RCS LOCA major event is sufficiently different from the following Major Event LOCAs from last 2 exams, to satisfy guidance annotated in comment GENERIC-1 below: 2019 Scen 1 2019 Scen 2 2017 Scen 3	Answered in the generic comment responses below Scenario #1 is different from 2019 Scenarios as at E-1 Step #12 RNO the crew transitions to ECA-1.1 where the previous scenario was completed at E-1 Step #10 or it was a DBA LOCA in which the transfer to cold leg recirculation was a critical aspect of the scenario. It is different from 2017 Scenario #3 as the LOCA size is different and the scenario was completed when the crew transitioned to ES-1.2 at E-1 Step #13. --NRC: If I understand correctly, the 2020 LOCA is the only one of the bunch where the success path is to transition to ECA-1.1, is that correct? Yes – Correct. It is different as that the EOP flowpath ends after a transition to ECA-1.1 which did not occur during the 2019 and 2017 LOCA scenarios.
Scenario 2		
9	Justify how the SGTR major event is sufficiently different from the following Major Event SBOs from last 2 exams, to satisfy guidance annotated in comment GENERIC-1 below: 2017 Scen 1	Answered in the generic comment responses below Scenario #2 is different from 2017#1 as the Tube Leak / Rupture is on a different SG which will now require securing the TDAFP Steam Supply. Additionally, 2 significant differences are that normal PZR Spray is not available for RCS depressurization which will require the use of PZR PORVs via Step #16 RNO. The second difference is that Critical Task #20 (depressurize RCS to SI termination criteria) was also added where previous scenarios stopped after the cooldown but prior to the depressurization.
10	Credit event 4 tube leak as a Component malfunction vice reactivity, since any reactivity change is in response to a malfunction.	complete

11	CT-1: Are there any blowdown drains, or sample valves that need to be shut as well for ruptured SG?	BM HIS-2A (SG Blowdown Containment Isolation Valve) will automatically close on a SG Blowdown Isolation Signal and is not listed in the CT performance indicator (since the crew has to take no action). The SG Blowdown Isolation signal will occur on either a SI signal or a Motor Driven AFW Actuation Signal. The crew will have to close AB HIS-8 (Steamline low point drain valve) and is listed in the CT performance indicator.
12	CT-2: define what value constitutes loss of subcooling.	Per the PWROG explanation of CT-19 there is a footnote describing minimum required subcooling. The footnote states "1 the plant-specific setpoint corresponding to ERG Footnote R.10 (R.11 for adverse containment). This is the RCS subcooling corresponding to E-3, Step 15 (Step 16 LP). The intent is for the crew to maintain sufficient subcooling to prevent transition from E-3 to ECA-3.1." E-3 Step #15 states "CHECK RCS Subcooling - GREATER THAN 50°F [70°F]". The CT has been updated to state " Too high to maintain minimum required subcooling. (RCS Subcooling is required to be GREATER THAN 50°F [70°F] to prevent a transition to ECA-3.1) at Step #15 RNO"
13	CT-3: need a bounding criteria in the CT definition.	E-3 SI termination criteria is any of the following conditions satisfied (per E-3 Step #17b): • Both of the following: • RCS pressure – LESS THAN RUPTURED SG(s) PRESSURE • PZR level – GREATER THAN 9% [29%] OR •PZR level - GREATER THAN 74% [64%] OR • RCS subcooling – LESS THAN 30°F [50°F] This has been added to the CT and as the depressurization continues until one of the above items is met, bounding of the CT has been updated as follows. "If the RCS reaches saturation conditions (Subcooling = 0) or Pressurizer NR level reaches 100% (i.e PZR complete fills which would cause RCS Pressure to begin to rise inhibiting SG Tube Rupture mitigation), the depressurization continued for too long and this Critical Task is not met."

Scenario 3		
14	Justify how the SBO major event is sufficiently different from the following Major Event SBOs from last 2 exams, to satisfy guidance annotated in comment GENERIC-1 below: 2017 Scen 4	Answered in the generic comment responses below Scenario #3 is different from 2019 scenario #4 as Critical Task #22 is applicable vice Critical Task #23 and the method to restore AC power is from offsite per EOP Addendum 7, Restore Offsite Power, not AEPS and COOP power which is EOP Addendum 39. Scenario #3 is different from Scenario 2017 #4 for the same critical task reason and the power was restored via an Emergency Diesel Generator Start vice Offsite power restoration. NRC Ok.
15	Event 8, “Offsite Power becomes available,” is not a component malfunction. You can leave it as an event as a change in conditions but nobody gets credit for a malfunction for it.	Complete – left as event 8 with no event type. Lowered scenario malfunction count to 7 from 8.
16	CT-1: There is no bounding criteria in the CT definition.	Added a time bounding of 15 minutes. The CT now reads "Energize NB02 AC Emergency Bus using EOP Addendum 7, Restoring Offsite Power, within 15 minutes of being notified that offsite power is available."
17	CT-2: Evaluate bounding the closure of A PORV with an objective plant parameter rather than a procedure step … i.e. before loss of subcooling, for example, or initiation of SI, or drawing a bubble in the vessel head.	Step #3 of ECA-0.0 directs the crew to "CHECK If RCS Is Isolated:" and Step 3.b directs closing the PORV if RCS pressure is less than 2335 psig. "Before the completion of step #3" was chosen as the bounding criteria as it is conservative with respect to accident mitigation and plant degradation. I.e. the crew is required to complete this action before or to prevent plant degradation such as RCS saturation and potential bubble formation. No change was made.
Scenario 4		
18	Event 1, credit as an Instrument malfunction vice Reactivity.	Completed
19	Event 7 credit as component malfunction vice Major.	Completed
20	Event 5 specify which SG faults.	Specified 'A' SG
21	CT-1: Do all 3 SGs need to reach dryout conditions or just one of the two? In the past I think we have done 2 out of 4 reach dryout.	Yes. 3 are required per this continuous actions step in FR-H.1. Step #2a states: 2. CHECK If RCS Bleed And Feed - REQUIRED

		a. SG WIDE RANGE level in any three SGs - LESS THAN 27% [42%]. If this is a yes, then the RCPs are secured and GO TO Step #12 to initiate SI then establish a bleed path.
22	Major	Scenario #4 is different from the 2019 scenarios as FR-H.1, Loss of Secondary Heat Sink, was not a major event in 2019. Scenario #4 is different from the 2017 scenario #4 as the 2017 scenario was a momentary entry with the success path of starting the TDAFP and then exiting. 2020 Scenario #4 is different as RCS Bleed and Feed will be required due to 3 SGs WR levels, and has different critical tasks associated with successful initiation of RCS Bleed and Feed. NRC OK

Generic Comments

	Comment	Resolution
1	GENERIC-1: NUREG 1021 Rev 11 APP D states: *"if any major event is repeated from either of the previous two NRC initial licensing operating tests, the examination author should change the major event, the ICs, or subsequent malfunctions (or a combination) to alter the course of action (within the emergency procedures) for the given scenario(s). The NRC expect that all major events would be broadly sampled over the course of several operating tests and that no major event will routinely be omitted without justification. If a facility licensee encounters difficulty meeting these requirements (e.g., because of large class sizes requiring the generation of more scenarios than normal), it should coordinate with the NRC chief examiner to meet the intent of this section to the extent possible."* Ensure all scenario Major events satisfy the above guidance as related to last two exams.	The 2020 ILT Scenario major events are different from the previous ILT operating tests in the following ways: Scenario #1 is different from 2019 Scenarios as at E-1 Step #12 RNO the crew transitions to ECA-1.1 where the previous scenario was completed at E-1 Step #10 or it was a DBA LOCA in which the transfer to cold leg recirculation was a critical aspect of the scenario. It is different from 2017 Scenario #3 as the LOCA size is different and the scenario was completed when the crew transitioned to ES-1.2 at E-1 Step #13. Scenario #2 is different from 2017#1 as the Tube Leak / Rupture is on a different SG which will now require securing the TDAFP Steam Supply. Additionally, 2 significant differences are that normal PZR Spray is not available for RCS depressurization which will require the use of PZR PORVs via Step #16 RNO. The second difference is that Critical Task #20 (depressurize RCS to SI termination criteria) was also added where

		previous scenarios stopped after the cooldown but prior to the depressurization. Scenario #3 is different from 2019 scenario #4 as Critical Task #22 is applicable vice Critical Task #23 and the method to restore AC power is from offsite per EOP Addendum 7, Restore Offsite Power, not AEPS and COOP power which is EOP Addendum 39. Scenario #3 is different from Scenario 2017 #4 for the same critical task reason and the power was restored via an Emergency Diesel Generator Start vice Offsite power restoration. Scenario #4 is different from the 2019 scenarios as FR-H.1, Loss of Secondary Heat Sink, was not a major event in 2019. Scenario #4 is different from the 2017 scenario #4 as the 2017 scenario was a momentary entry with the success path of starting the TDAFP and then exiting. 2020 Scenario #4 is different as RCS Bleed and Feed will be required due to 3 SGs WR levels, and has different critical tasks associated with successful initiation of RCS Bleed and Feed.
2	NUREG 1021 states that scenario packages should include a range of starting power levels, so include startup < 5%. This package does not contain a scenario < 5%; starting powers for the 4 scenarios are 100%, 80%, 50%, and 22%. Upon review, the exam lead and branch chief concur that it will be acceptable to leave the proposed exam package as-is, because the 22% scenario contains events whose response is specifically dictated by being at low power: an RCP trip and a Turbine trip, neither of which result in a reactor trip due to being at low power. The intent of varying power levels is met, by a differentiation in crew response. However, Callaway should strive to incorporate a startup scenario in future submittals.	Understood. The intent was to vary power levels and not be predictable by always having a scenario less than 5%. For Callaway's design, scenarios less than 5% limit the consequential malfunctions and majors which tends to lead to a predictable scenario. Startup scenarios were provided in the past 2 exams.
3	Explain how CW will satisfy overlap restrictions between audit exam and initial exam.	For the operating test, the Audit Exam is the previous ILT Operating Test. I.e. class 2020 ILT class will take the 2019 class NRC

		Operating Test as their Audit Operating Test. To ensure no overlap, no JPM from the 2019 ILT class are available for the 2020 class. All Scenarios are created new with an emphasis on not repeating malfunctions from the previous 2 classes. Some events, at the malfunction level, may reappear to satisfy the quantitative attributes for each license type. For the written test, the Audit Exam is developed independently (using the same process as developing the NRC written) prior to signing on to exam security and receiving the written outline. Once received, K/As are compared and identical KAs are flagged to ensure no overlap at the question level. Summary: written exams are developed independently and sequentially. A review of the final products is performed to ensure no overlap. The previous ILT Op Test Exam is the current Audit Op Exam and overlap restrictions are applied basically excluding the previous ILT Op Test.