

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

JPM Outline Comments		
1.	NRC:	(Administrative / JPM RO A1.1) – This is just a general reminder when using bank JPMs: Ensure they comply with Rev 12 of NUREG. Looking at the previous version of Admin JPM A-RO-46, the JPM will need a Task Standard statement added. The Task Standard should say something like, “The applicant is required to determine that a 12-hour overtime shift cannot be performed due to violating work hour rules for exceeding 72 hours in a 7-day period. The applicant must also determine that they must be relieved by XXXX (this should be a time based on what is provided in the initiating cue) if they assume the shift to not exceed work hour rules.” Going forward this is true of all JPMs. Ensure each includes a Task Standard statement which makes it clear what must be done, accomplished, determined etc. by the applicant to successfully complete the JPM (why are the critical steps the critical steps).
	Facility:	All JPMs will have a task standard included IAW NUREG-1021 rev 12.
2.	NRC:	(Administrative / JPM RO A1.2) – RO Outline form 3.2-1 incorrectly lists for JPM A-RO-41 the heat balance as performing surveillance LOS-CS-S001. Should be LOS-CX-S001. In addition, be detailed in the revision record summary of what was modified about this JPM or provide me with the previous revision it was modified from (I have Rev 00) when you submit the exam on July 1 st . Must meet requirements of ES 3.2 A (2) to be a modified JPM.
	Facility:	Corrected 3.2-1 in revision 1. Revision record includes description of changes.
3.	NRC:	(Administrative / JPM SRO A1.2) – Looking at Rev 00 of this JPM the power and temperature given are just above the green line on LOA-HD-101 Figure 1. For the other lines you needed to be below the line for actions to be required. Make sure it is clear in the performance standard how the applicant is expected to read the figure and why they are required to enter the TS statements. Must you be below the line or does the line indicate expected conditions when the plant is outside of COLR analyzed conditions? Make sure standards are clear as to how to read the figure and that we are giving the applicants conditions which require the actions expected.
	Facility:	Task standard will include description of where the candidate should place their plot point and how it is interpreted.
4.	NRC:	(Administrative / JPM SRO A3) – Ensure the revision record summary for JPM A-SRO-50 is clear as to what the modification was or provide me with previous revision when submitting the exam. I already possess revision 01.
	Facility:	Revision summary includes a description of what was modified.

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

JPM Outline Comments		
5.	NRC:	(Control Room Systems / JPM b) – Importance Rating for K/A 510001 A2.01 is RO 3.5 / SRO 3.3 not 4.0 as listed on the form 3.2-2's.
	Facility:	Revised to match correct Importance Rating listed in NUREG-1123
6.	NRC:	(Control Room Systems / JPM e) – RO and SRO Forms 3.2-2 call out different K/A's for this JPM. Either is acceptable. Select either K/A and make sure all three versions of Form 3.2-2 match.
	Facility:	Revised all outlines to 205000 A1.02
7.	NRC:	(Control Room Systems / JPM f) – Looking at LOS-RM-Q1 it appears the only verifiable actions taken by the applicants will be to take the Scram Discharge Volume Keylock switch to BYPASS and then back to NORMAL. LOD appears to be a 1 for this JPM.
	Facility:	Examinee must also navigate to the appropriate display in the RCMS interface to verify proper operation of the RCMS interface. If that is not sufficient, we can replace.
8.	NRC:	(Control Room Systems / JPM h) – Ensure the revision record summary for JPM S-RL-01 is clear as to what the modification was or provide me with previous revision when submitting the exam. I already possess revision 00.
	Facility:	Revision summary includes a description of what was modified.

Simulator Scenario Outline Comments		
1.	NRC:	(Scenario 23-1-1) – For event 4 consider the drifting rod not remaining at full in such that the weighted device is required to hold the rod in and the ATC will be required by LOA-RD-101 Step 2.4.2 to reduce power by 100 MWe using RR flow. This will enable the event to be more correctly characterized as a reactivity manipulation.
	Facility:	Facility will change to the NRC's suggestion. Previous event 5 was moved to before event 3 to allow crew to perform all actions associated with abnormal operating procedure.

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

Simulator Scenario Outline Comments		
2.	NRC:	(Scenario 23-1-1) – Event 4 also requires the SRO to evaluate and enter Tech Specs, specifically LCO 3.1.3 Condition C for an inoperable control rod which is not stuck. This should also be assessed as a tech spec event for the SRO.
	Facility:	Current facility stance is that this event is not a TS 3.1.3 entry if the rod can be inserted and held full in. Per B3.1.3, the LCO is based on the scram insertion times, the control rod coupling integrity, and the ability to determine control rod position. A failure of the collet finger is not considered a Technical Specification entry if the control rod can be fully inserted.
3.	NRC:	(Scenario ILT 23-1-1) – Events 8 and 9 appear redundant. I would assume RPS B will fail to trip automatically and manually and the scram procedure will drive the crew to manually insert ARI. It is vital as you indicate that ARI not work in auto or else the critical task to initiate ARI before blowing down would not be valid as the plant could carryout the action with no operator actions required if level was lowered below level 2 to deal with the ATWS. To me this is one event that should just be RPS B fails to scram and ARI must be manually initiated. It would be a component malfunction with manual control for the ATC.
	Facility:	Events combined in scenario outline. ARI will not trigger on its own. The main steam lines will close on high tunnel temperature resulting in a high power and pressure condition that will lift all SRVs.
4.	NRC:	(Scenario ILT 23-1-2) – Scenario Guide will need to be clear how it is expected that the BOP will also receive credit for the reactivity maneuver in event 2.
	Facility:	Scenario guide will specify how the BOP will receive credit for reactivity maneuver. BOP operator will upshift the RR pumps as this is their role during RR pump upshift.
5.	NRC:	(Scenario ILT 23-1-2) – Event 6 appears it will also count as a manual control action for the ATC operator if it is expected that the ATC will be controlling the FRV position in manual. If they are just selecting manual and are not expected to be making position adjustments then I would not give manual control credit.
	Facility:	Revised outline to reflect credit given for manual control.

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

Simulator Scenario Outline Comments		
6.	NRC:	(Scenario ILT 23-1-2) – Explain how event 7 will be a manual control action for the BOP? Per NUREG 1021 ES 3.4 manual control events include taking manual control of equipment that normally has an automatic control function which could include manually repositioning or starting a component which has an automatic start/alignment function which did not occur. Will the BOP be manually controlling RCIC? Just stopping it when it incorrectly starts is not normally classified as a manual control event.
	Facility:	Changed to an Instrument failure for the BOP as 23-1-2 event 4 will count as a manual control for the BOP operator as was previously not credited.
7.	NRC:	(Scenario ILT 23-1-2) – For both Critical Tasks it will be necessary to ensure that this scenario contains the conditions which would result in CT failure. Firstly, if DW spray is not initiated by the crew, will the accident conditions result in DW temperature exceeding 340F? If it does, how long does it take? 20-30 minutes is ok, but 3 hours is not. Second, I am guessing perhaps the vacuum breaker failing open could contribute to this occurring, but will there be a time when the DSIL curve will not be met? If the DW temperature and pressure will always rise in a manner that the DSIL curve is always met, then this would not be a valuable CT boundary condition. Lastly, since one CT says spray the DW before 340F is reached and the other says don't spray the DW before the DSIL curve is met, we must ensure that there is a time in the scenario where it is reasonable for the crew to accomplish both. I would recommend running the scenario and seeing how it progresses without spraying the DW and understand the timelines and ensure boundary conditions would be crossed with delayed or inappropriate crew actions.
	Facility:	Without Drywell sprays in service Drywell pressure will exceed 60 psig before exceeding 340°F. Boundary condition for CT 1. For CT-2 Drywell sprays are directed when DW temperature exceeds 135°F and conditions do not plot on the safe side of the DSIL curve until about 4 minutes after reaching 135°F.
8.	NRC:	(Scenario ILT 23-1-2) – In this scenario, it is expected that the crew will have to ED when the PSP curve is exceeded according to event 10. Will we exceed PSP if the CTs are properly performed (DW spray initiated)? If we exceed PSP even with DW sprays operating, then having to ED would be a CT also. Following LGA-003 the crew would wait until PSP is exceeded and then blowdown. We would have to determine an appropriate boundary condition for when the ED would have to be accomplished by once PSP is exceeded. If the scenario would eventually cause PCPL to be exceeded without ED then that could be the boundary condition or we could discuss alternate boundary conditions per the NUREG.

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

Simulator Scenario Outline Comments		
	Facility:	PSP is exceeded based on scenario driven leak rate rise, but the leak rate to violate PSP with DW sprays I/S is high enough to depressurize the reactor before exceeding PCPL if the time to respond is reasonable. If a boundary condition cannot be agreed upon the scenario can be revised to not violate PSP.
9.	NRC:	(Scenario ILT 23-1-3) – CTs MUST always be specific to the scenario they are in. So, regarding the CT for inhibiting ADS while power is > 3% how long will we be > 3%? The nature of the ATWS is that it starts at low power (10%) due to the SDV hydraulic condition. When RR pumps are tripped, level lowered, and hopefully SLC injected power should go downscale quickly. Not to mention the time listed. Not sure we would lower level far enough down to even start the ADS timer. Ok so at the end of the day we are trying to avoid an ADS initiation with an ATWS in progress and APRM > downscale. I am not sure this is the scenario for this CT. The justification also indicates that this time (19.3 minutes) is from the NON-time critical actions section of the procedure. If we were to use this CT, I recommend getting rid of the time and make the boundary condition be to inhibit ADS so that there is no blowdown with APRM > downscale. I am still not convinced that we will ever achieve a condition where the ADS timer will even start. No matter placing the inhibit switch in INHIBIT is one of the first things the EOPs will drive them to do.
	Facility:	Removed Inhibit ADS CT. Revised the outline to reflect actual ATWS characteristics. Exam Author's mindset was reactor power following initial operator response. The ATWS is initially 20% RTP before lowering level and tripping RR pumps. Reactor power following operator action is 10% RTP.
10.	NRC:	(Scenario ILT 23-1-3) – For the time critical action CTs associated with suppression pool cooling and SLC I would like some more detail on why these times represent time critical actions for this scenario. I know why we must do these actions, but the times need more substance as to why it matters if we don't meet them. If someone fails one of these CTs and they ask "who cares?", I have to be able to answer why we care.
	Facility:	SBLC boundary condition changed to "prior to suppression pool temperature exceeding 188°F." 188°F corresponds to Boron Injection Initiation Temperature. With suppression pool cooling maximized and no SBLC injection BIIT is exceeded in approximately 35 minutes following establishing the initial ATWS level band Suppression pool cooling boundary condition was changed to the LGA-010 override requirement of 10 minutes from when all heat from the RPV is going into primary containment. This condition is not met until the Main Turbine is tripped and the bypass valves go closed due to the loss of EHC. The simulator guide will contain guidance for the simulator operator to "Mark" time 0 for override entry condition.

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

Simulator Scenario Outline Comments		
11.	NRC:	(Scenario ILT 23-1-4) – For the TS call on event 3, please ensure there will be enough diagnosis information available for the unit supervisor to enter the instrument LCO 3.3.5.1. Since HPCS can start on high drywell pressure or lo lo level it must be clear what instrument failed or else we get the non-committal answer that they will wait until IMD does their investigation before entering the instrument spec. With instrument specs we expect them to identify which function(s) is/are impacted by the condition to get a completely correct answer, so it is important that they get enough information to get a correct answer if we expect them to enter LCO 3.3.5.1.
	Facility:	Changed outline to reflect specific cause for spurious initiation of HPCS, Lo Lo level.
12.	NRC:	(Scenario ILT 23-1-4) – For event 5 loss of RCMS Interface, when this event was last performed on the 2020 exam only the ATC was given credit for performing the actions of LOP-RM-03. What is different this time that both board operators have verifiable actions in response to this condition?
	Facility:	This is a different event than the 2020 exam. This is a loss of power in the control room which requires the BOP to transfer power supply modeled behind the boards in the simulator. The 2020 event, MRD343, required EO in field to transfer power.
13.	NRC:	(Scenario ILT 23-1-4) – For the post major malfunction event 8, is there any impact on the severity of the FW leak in the drywell by this pump not tripping? Where is the leak in relation to the check valve inside containment? I am asking to see if there is a CT that can be made for not addressing this condition in a timely manner.
	Facility:	Feedwater leak modeled inside containment is downstream of the check valve so this failure will assist with level control until taken offline.
14.	NRC:	(Scenario ILT 23-1-4) – Since there is no manual control event for the BOP operator in scenario 4, ensure that this scenario is not used for SRO-I candidates performing their only board watch in the role of BOP. I know the two proposed schedules do not have an SRO-I as the BOP for this scenario, but if the class configuration changes in the future we will need to keep this in mind.
	Facility:	Facility is aware of this risk. A reduction of 2 candidates makes Scenario 4 no longer required.

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

Simulator Scenario Outline Comments		
15.	NRC:	(Scenario ILT 23-1-4) – Regarding the CT to initiate suppression chamber sprays prior to drywell sprays this seems like it could be pertinent to any LOCA or steam leak in the primary containment. Why is it being called out here as opposed to other scenarios where torus spray is required? Is there something regarding a feedwater break in containment where this condition and the risk of chugging is more pernicious? Since I have not used this CT before, I would not be inclined to have it become a standard CT for BWR leaks/LOCAs.
	Facility:	Changed to prior to 12 psig. Facility will manage leak rate to provide reasonable time between initiating condition and boundary condition.
16.	NRC:	(Scenario ILT 23-1-4) – Regarding the CT for initiating drywell sprays, the use of 10 minutes appears to be an alternate boundary condition, which is acceptable but will require additional justification as it is a NON time critical operator action. If DW sprays are not started will the PSP curve be exceeded based on this accident? If so, then prior to exceeding the PSP curve which would cause us to have to blowdown would be a better boundary condition.
	Facility:	Changed to before violating PSP. Facility will manage leak rate to verify PSP is not violated until 20-30 minutes have elapsed from meeting DW spray requirements.
17.	NRC:	(Scenario ILT 23-1-SPARE) – For the first CT, I am used to seeing the boundary condition as a scram must take place prior to exceeding a max safe condition (temperature, radiation rate, or sump level) in a secondary containment space per step RB/TRL-6 of LGA-002.
	Facility:	Revised outline to reflect NRC recommendation.
18.	NRC:	(Scenario ILT 23-1-SPARE) – For the second CT, I need to know what the plant impact is for not shutting the discharge valve on the TDRFP for 11 minutes for this scenario . The justification provided talks about a loss of inventory. Will RPV level be adversely affected? We need there to be some degrading condition that will be evident to the applicants based on plant conditions that they should recognize requires action to rectify. If they do nothing in this instance, will it be evident to them or the graders that they missed a critical task . Please include OP-LA-102-106 “LaSalle Operator Response Time Program” with the exam submittal since it is used to justify several of the critical tasks for this exam.
	Facility:	If the operator fails to take action the MDRFP cannot maintain RPV water level within RPV control band. And level will lower until HPCS and RCIC initiate or an emergency depressurization is commenced and condensate feeds the RPV high through the open discharge valves. If RCIC and HPCS fail to start and a depressurization is not performed TAF will be reached in 35 minutes. Facility can add HPCS

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

Simulator Scenario Outline Comments		
		fail to auto start with degraded RCIC flow and replace the CT with “Restore RPV injection prior to TAF.”
19.	NRC:	(Scenario Form 3.4-1) – Manual control events should be counted twice for each applicant. Specifically, if appropriate these events would count as a manual control event and as a component/instrument malfunction for the ATC or BOP when tallying ‘beans’ on the ES 3.4-1 form. TS events for SROs and manual control events are the only events we are allowed to count “twice” for an applicant (ES 3.4 page 6 of 10 bullet (7)). So bottom line malfunction events we are giving manual control credit for we are also expected to count as a component/instrument malfunction for that candidate as appropriate. Same for technical specification events. The SRO gets credit for component or instrument malfunctions they are supervising recovery from and if they have to make a TS call that event would also be credited as one of the two required TS events on their exam.
	Facility:	Revised 3.4-1 to reflect counting Manual Control events as also I/C events for the performing operator and TS events as additional I/C where appropriate for the US.

Written Outline vs. Operating Outline Potential Overlap Comments		
1.	NRC:	(Written Outline Item #21) – Ensure there is no significant overlap between written outline item #21 (Q17) and Scenario 23-1-1 events 8/9 for RPS failure to automatic scram.
	Facility:	ATWS conditions are different between Q17 and those presented in 23-1-1.
2.	NRC:	(Written Outline Item #23) – Ensure there is no significant overlap between written outline item #23 (Q18) and Scenario 23-1-1 event 10 for radiological release.
	Facility:	There is no overlap between the K/A and the scenario.
3.	NRC:	(Written Outline Item #49) – Ensure there is no significant overlap between written outline item #49 (Q38) and Scenario 23-1-2 event 7 for RCIC and reactor water level.
	Facility:	There is not overlap.

LaSalle 2024 Initial License Exam Operating Test Outline Review Comments

Written Outline vs. Operating Outline Potential Overlap Comments		
4.	NRC:	(Written Outline Item #53) – Ensure there is no significant overlap between written outline item #53 (Q42) and Scenario 23-1-2 event 11 for operation of SRVs after ADS actuation/blowdown.
	Facility:	Removed event 11 from 23-1-2.
5.	NRC:	(Written Outline Item #63) – Ensure there is no significant overlap between written outline item #63 (Q50) and Scenario 23-1-2 event 4 for instrument air compressor starts/trips.
	Facility:	Scenario 23-1-2 will be written to place the pressure below the lowest distractor option on the written exam question.
6.	NRC:	(Written Outline Item #64) – Ensure there is no significant overlap between written outline item #64 (Q89) and Scenario 23-1-2 event 4 for response to low instrument air pressure.
	Facility:	There is no significant overlap. A different course of action is required and the action taken in 23-1-2 is not one of the available distractors.
7.	NRC:	(Written Outline Item #68) – Ensure there is no significant overlap between written outline item #68 (Q53) and Scenario 23-1-4 event 5 for lights and alarms associated with reactor control failures.
	Facility:	Q53 is about controller fault. 23-1-4 addresses loss of power.
8.	NRC:	(Written Outline Item #71) – Ensure there is no significant overlap between written outline item #71 (Q56) and Scenario 23-1-2 event 3 for RR flow control loop flow mismatch.
	Facility:	Actions taken in scenario are until the technical specification call is made and is not expected to progress to the response required in question 56.
9.	NRC:	(Written Exam Tier 4) – Reminder to ensure that Tier 4 (GFE) questions must be operationally valid. It is recognized that writing a question solely to meet the KA for these questions will not meet this operational validity requirement. Include actual indications and parameters the operators have available to them and/or actual procedures to be used by operators in these questions.
	Facility:	Exam author will develop questions with operational based information with the answer derived from GFES knowledge and/or understanding.