Facility: LIMERICK NUCLEAR POWER PLANT											**Exam Date: July 12, 2021**	
Admin JPMs	1 ADMIN Topic and K/A	2 LOD (1-5)	3 Attributes							4 Job Content		5 U/E/S	6 Explanation
			I/C Focus	Cues	Critical Steps	Scope (N/B)	Overlap	Perf. Std.	Key	Minutia	Job Link		
SRO-A1.a LOJPM6757	Conduct of Operations 2.1.5 Determination of Adequate Shift Staffing	3		X				X				~~E~~ S	**NRC**: • Task Standard is deficient in that it does not clearly identify the predetermined outcome against which task performance will be measured. Task Standard states *"Determine that shift is below minimum staffing requirements and take appropriate corrective action to ensure adequate shift staffing.*" Enhance the Task Standard to also identify the outcome (i.e., the minimum staffing specifics and required corrective actions). • JPM is difficult to follow from a sequencing standpoint and Critical Step information appears to overlap to some degree. Accordingly, group and separate the ***"Shift Manger Critical Steps"*** from the ***"Equipment Operator Critical Steps."*** Note that this change may result in the consolidation of certain Element / Performance Standard information. Apply the existing *"Evaluator Note information"* as appropriate. • Bulleted statement in the Initiating Cue reads *"Include any immediate and long term (greater than 2 hours) corrective actions that are required to ensure adequate shift staffing is met."* The *"greater than 2 hours"* parenthetical information appears to conflict with the individual Critical Step Performance Standards which place a 2-hour time limit on restoration of crew composition, with the exception of the Shift Manager position. Recommend eliminating the bulleted statement from the Initiating Cue and revising the last part of the Cue to read

													"Determine if staffing requirements for current operating modes are met and whether any corrective actions are required." • Remove the bolded statement at the bottom of the cue sheet that states *"Provide immediate and long term requirements and any corrective actions required below:"* This statement is redundant to that of the Initiating Cue and is therefore unnecessary. **LIMERICK**: • Revised Task Standard • Separated Shift Manager and NLO critical tasks into different groupings as requested. • Removed bulleted item and revised the initiating cue as requested. • Removed bolded statement as requested. **Post NRC Walk-through** • Revised to include Fire Brigade member as a choice to assume shift communicator duties. • Labeled Floor Supervisor as Fire Safe Shutdown qualified in JPM initial conditions.

SRO-A1.b LOJPM6763	Conduct of Operations 2.1.40 Determine Acceptability of Installing Fuel Pool Gates	3						X				E S	**NRC**: • Enhance the Task Standard to include the fact that the Fuel Pool Gates will WAIT to be installed by providing the values for Fuel Pool Cooling heat transfer capability ***(4.44 MW)*** and Spent Fuel Pool Decay Heat Load ***(4.56 MW)***. • Remove the name of the Reactor Engineering individual in Item 5 of the Initial Conditions. It is sufficient to just say *"Reactor Engineering."* • Include Attachment 9 of RT-1-053-850-0 in the JPM. • Include Attachment 8 of GP-6-1 in the JPM. **LIMERICK**: • Added heat load and cooling system capability to the Task Standard as requested. • Removed RE named individual. • Attachment 9 of RT-1-053-850-0 is included in the JPM. • Planned to give Attachment 8 of 1GP-6.1; wrong revision (43) of procedure was sent to Lead Examiner. **Post NRC Walk-through** • Included 1GP6.1 step 3.12.11.6b to candidate action element. • Changed estimated time to complete from 25 minutes to 15 minutes.

SRO-A2 LOJPM6758	Equipment Control 2.2.12 Review Drywell Floor Drain Sump/Equipment Drain Tank Logs and Determine Compliance with TS 3.4.3.2	2		X				X				~~E~~ S	**NRC**: • Step 6 of the JPM should be identified as a Critical Step, similar to Step 6 of associated RO Admin JPM LOJPM6708. • Revise the Element and Performance Standard for Step 6 of the JPM to include ***"recognition"*** of the fact that the Tech Spec 3.4.3.2 limit for Floor Drain Sump leak rate of 2 gpm in a 24-hour period was exceeded. Merely *"referencing"* Tech Specs does not meet the intent of Critical Step performance. • Revise the Initiating Cue as follows: ○ Delete the last part of the Initiating Cue that states *"Identify all Tech Spec actions that apply for the condition, if any."* ○ Revise the second sentence of the Initiating Cue to state ***"Review the completed surveillance for compliance with Acceptance Criteria and document results."*** Original version was leading with respect to Tech Spec implications. • Remove the bolded statement at the bottom of the cue sheet that states *"Document discrepancies and Tech Spec concerns, if any:"* This statement is redundant to that of the Initiating Cue and is therefore unnecessary. **LIMERICK**: • Step 6 designated a critical step. • Revised step 6 Performance element and standard as requested. • Revised Initiating Cue as requested. • Removed bolded statement at bottom as requested. **Post NRC Walk-through** • Changed Task standard to: "Identifies per T.S. 3.4.3.2 source of leakage be identified within 4 hours or be in Hot S/D within next 12

													hours." • Changed TS reference from 3.4.3.2.f to 3.4.3.2 • Circled "SAT" on surveillance test provided for JPM. • Improved marked-up surveillance test provided for JPM. readability.

SRO-A3 LOJPM6759	Radiation Control 2.3.15 Area Rad Monitor(s) Fail Downscale	3		X	X							~~U~~ S	**NRC**: • Procedures S27.1.A and S27.10.A were not included with the 75-Day submittal to facilitate review of this JPM. • Step 1 of the JPM requiring the applicant to identify that Channels 9, 30, and 33 are below the downscale setpoint of 0.02 mr/hr, should be designated as a Critical Step. • Remove the Cues provided for JPM Steps 1 and 2. They are not necessary for the conduct of this Admin JPM, which is being administered in a classroom setting. • The Critical Step Actions listed in the Tables for **both** the ***Task Standard and NRC Key*** are disjointed and confusing with respect to the following: ○ Regarding the statement which reads *"Candidate may determine to reference S27.1.A Step 4.3 or as a minimum: **(Plan to include)**"*: ❖ What does ***(Plan to include)"*** mean? ❖ How do the words ***"may determine"*** in the above statement, convey a Critical Step Action? What Element of the JPM does this statement correspond to? Intent of this statement is unclear. ❖ Is the reference to S27.1.A Step 4.3 in the previous bullet correct? ○ For Channel 9 Line Item, ***"T-103 / SAMP referenced"*** is listed under the Action column. What is the specific Action? Clarification required. ○ For Channel 30 & 33 Line Items, ***"Criticality ARMs"*** is listed under the Action column. What is the specific Action? Clarification required. • Revise Element for Step 11 of the JPM to state ***"Evaluate Tech Spec 3.3.7.1 for Spent Fuel Pool Criticality Monitors."*** Merely

													"referencing" Tech Specs does not meet the intent of Critical Step performance. ***"Evaluate"*** implies that a Tech Spec determination has to be made. • Elements for JPM Critical Steps 8, 9a, and 9b are deficient in that no task performance items have been scripted for these elements. Each Element consists of nothing more than a listing of select ARMs. **LIMERICK**: • S27.1.A and S27.10.A should have been included on the References CD provided. • Step 1 designated critical step. • Cues for 1 and 2 removed. • Revised Task Standard and NRC Exam Key to make it easier to read and understand. • Revised Element wording for Step 11 as requested (now Step 10). • Revised Steps 8, 9a and 9b to provide expected action.
SRO-A4 LOJPM6733	Emergency Procedures/Plan 2.4.40 Authorize the Use of KI	2		X				X				~~E~~ S	**NRC**: • Enhance the Task Standard to (a) identify the names of the emergency workers authorized for KI, and (b) include the requirement to document the decision to issue KI by correctly filling out *"Thyroid Blocking Agent Authorization"* Form EP-AA-113-F-03. • Revise Initial Condition #5 to only state ***"The operation will take between 15 and 20 minutes in a 200 R/HR field (CDC)."*** The SRO applicant is being provided EP-AA-113, *"Personal Protective Actions,"* as a reference. Sufficient information exists for the applicant to reasonably determine that there is a potential for high thyroid exposure to radioactive iodine for emergency workers, given that (a) Initial Condition #2 states that all 3 barriers have been lost, and (b) EP-AA-113, Step 4.4.1.B, Condition 1, specifically states *"Loss of the Reactor Fuel Clad Barrier is a good indication of*

													possible high iodine concentrations." • Revise Item #1 of the Initiating Cue to read ***"Determine if the issuance of KI is authorized and complete required documentation, if any."*** Delete Item #2 of the Initiating Cue to *"Complete section 4.4 of EP-AA-113."* From an evaluation standpoint, the applicant should not have to be directed where to go in procedures to complete the assigned task. Separately, Section 4.4.3, *"Briefing Personnel and Issuing KI,"* is not within the scope of this JPM. • Delete the Examiner Cue from Step 2 of the JPM. Include the ***"List of site individuals with possible adverse reaction to KI,"*** to the reference material being provided to the applicants IAW the *"Evaluator's Note"* preceding Step 1 of the JPM. • Include the applicable procedure steps from EP-AA-113 in the Element section of JPM Steps **3** *(4.4.1.B, Condition 1)*, **4** *(4.4.2.1)*, and **5** *(4.4.2.2)*. **LIMERICK**: • Task standard revised as requested. • Initial condition #5 revised as requested. • Revised Initiating Cue as requested. • Step 2 examiner Cue was deleted. • Added "List of site individuals with possible adverse reaction to KI" to Evaluator's Note before step 1. • Included procedure steps in elements 3 , 4, and 5 as requested. **Post NRC Walk-through** • Created three filled out EP-AA-113-F-02 forms d to be handed out with JPM. • Corrected procedure step in element from 4.4.1.B to 4.4.1.1.B and added EP-AA-113 4.4.1.1.B

													condition 2 to same element. • Inserted additional element 4 to account for critical step in EP-AA-113 step 4.4.1.3: *"If the condition A and/or B listed above are met then, RECOMMEND the issuance of one (1) 130 mg KI tablet to each emergency worker affected per day for 10 consecutive days or until directed that the risk no longer exists."*

RO-A1.a LOJPM6756	Conduct of Operations 2.1.20 Temperature Effects on Reactor Level Instrumentation	3						X				E S	**NRC**: • Task Standard is deficient in that it does not clearly identify the predetermined outcome against which task performance will be measured. Task Standard states *"Determine usable AND un-usable Reactor level instruments per T-291, Temperature Effects on Reactor Level Instrumentation."* Enhance the Task Standard to also identify the outcome (i.e., which instruments are **"usable"** and which are **"not usable"**). • Remove the bolded statement at the bottom of the cue sheet that states *"Document T-291 usable and NOT usable Unit 1 Reactor level instrumentation below:"* This statement is redundant to that of the Initiating Cue and is therefore unnecessary. **LIMERICK**: • Revised Task Standard as requested. • Removed bolded statement at bottom of Cue sheet as requested. **Post NRC Walk-through** • Changed note following element 2 to read: "… greater than MRT." • Added evaluator note following element 4: *"The candidate may indicate the Narrow Range Level Instrument, LI-42-1R606C, will indicate off scale low. It is considered usable as it will indicate correctly should RPV level recover."*
RO-A1.b LOJPM6755	Conduct of Operations 2.1.25 Determine Drywell Venting Parameters	3			X			X				E S	**NRC**: • Task Standard is deficient in that it does not clearly identify the predetermined outcome against which task performance will be measured. Task Standard states *"Determination that containment venting is permissible and calculation of the minimum allowable containment pressure value."* Enhance the Task Standard to also identify the Drywell Pressure value

													range (i.e., 0.35 to 0.4 psig) determined using OT-101, Attachment 6, *"Drywell Venting Conditions."* • JPM Element steps do not consistently reference the associated procedure steps from Sections 5.1.and 5.2 of OT-101, Attachment 3. • JPM Step 10 should be identified as a Critical Step. **LIMERICK**: • The Task Standard was revised as requested to read: *"Determine that containment venting is permissible and then calculate the minimum allowable Drywell pressure as value between 0.35 psig and 0.45 psig."* • JPM Element steps were revised to include associated steps from OT-101. • Identified Step 10 as a Critical Step as requested. **Post NRC Walk-through** • Revised Task standard to: *"Determine that containment venting is permissible and then calculate the minimum allowable Drywell pressure as value between 0.35 psig and 0.40 psig determined using OT-101 Attachment 6, "Drywell Venting Conditions."* • Changed Initial Condition label from "Suppression Pool Temperature.." to "Suppression Pool Air Space Temperature"
RO-A2 LOJPM6708	Equipment Control 2.2.12 Review Drywell Floor Drain Sump/Equipment Drain Tank Logs and Determine Compliance with TS 3.4.3.2 / 4.4.3.2	2						X				~~E~~ S	**NRC**: • Second sentence of the Task Standard states that ***"Tech Spec 3.4.3.2 / 4.4.3.2 is referenced for UNIDENTIFIED LEAKAGE."*** Merely *"referencing"* Tech Specs does not meet the intent of Critical Step performance. Revise the second sentence of the Task Standard to include ***"recognition"*** of the fact that the Tech Spec 3.4.3.2 limit for Floor Drain Sump leak rate of 2 gpm in a 24-hour period was exceeded. • Revise Element and Performance Standard for Step 6 of the JPM to

													include ***"recognition"*** of the fact that the Tech Spec 3.4.3.2 limit for Floor Drain Sump leak rate of 2 gpm in a 24-hour period was exceeded. Merely *"referencing"* Tech Specs does not meet the intent of Critical Step performance. • Remove the bolded statement at the bottom of the cue sheet that states *"Document discrepancies and Tech Spec concerns, if any:"* This statement is redundant to that of the Initiating Cue and is therefore unnecessary. **LIMERICK**: • Revised Task Standard as requested. • Revised JPM Step 6 Standard to recognition of exceeding TS limit. • Removed bolded statement at bottom of Cue Sheet as requested.
RO-A3 LOJPM6718	Radiation Control 2.3.15 Area Rad Monitor(s) Fail Downscale	3		X	X							~~U~~ S	**NRC**: • Procedures S27.1.A and S27.10.A were not included with the 75-Day submittal to facilitate review of this JPM. • Step 1 of the JPM requiring the applicant to identify that Channels 9, 30, and 33 are below the downscale setpoint of 0.02 mr/hr, should be designated as a Critical Step. • Remove the Cues provided for JPM Steps 1 and 2. They are not necessary for the conduct of this Admin JPM, which is being administered in a classroom setting. • The Critical Step Actions listed in the Tables for **both** the ***Task Standard and NRC Key*** are disjointed and confusing with respect to the following: ○ Regarding the statement which reads *"Candidate may determine to reference S27.1.A Step 4.3 or as a minimum: **(Plan to include)**"*: ❖ What does ***(Plan to include)"*** mean? ❖ How do the words ***"may determine"*** in the above

													statement, convey a Critical Step Action? What Element of the JPM does this statement correspond to? Intent of this statement is unclear. ❖ Is the reference to S27.1.A Step 4.3 in the previous bullet correct? ○ For Channel 9 Line Item, ***"T-103 / SAMP referenced"*** is listed under the Action column. What is the specific Action? Clarification required. ○ For Channel 30 & 33 Line Items, ***"Criticality ARMs"*** is listed under the Action column. What is the specific Action? Clarification required. • Elements for JPM Critical Steps 8, 9a, and 9b are deficient in that no task performance items have been scripted for these elements. Each Element consists of nothing more than a listing of select ARMs. **LIMERICK**: • S27.1.A and S27.10.A should have been included on the References CD provided. • Step 1 designated critical step. • Cues for 1 and 2 removed. • Revised Task Standard and NRC Key to make it easier to read and understand. • Revised Element wording as requested. • Revised Steps 8, 9a and 9b to provide expected action. **Post NRC Walk-through** • Revised Time To Perform from 15 to 20 minutes.

Simulator/In-Plant JPMs	1 Safety Function and K/A											
Sim A LOJPM3121	1 202001 A3.02 Start a Reactor Recirculation Pump	3		X				X				~~E~~ S	**NRC**: • Enhance the Task Standard to (a) indicate that the 1A Recirc Pump was ***"tripped"*** versus ***"shutdown,"***.and (b) provide the reason for tripping the pump, i.e., *"following confirmation of dual seal failure."* • Add a Cue at the start of the JPM to provide a marked up copy of S43.1.A, completed up to and including Step 4.4.6. **LIMERICK**: • Revised Task Standard. • Added Cue at the Start of JPM to provide marked up copy of S43.1.A through step 4.4.6 as requested.
Sim B LOJPM3015	2 217000 A4.01 RCIC Manual Slow Start	3										S	
Sim C LOJPM3029	3 241000 A4.19 Roll the Main Turbine	3		X				X				~~E~~ S	**NRC**: • Enhance the Task Standard by providing the information that Exhaust Hood Spray was manually initiated in response to a valid Exhaust Hood High Temperature Alarm condition. • Note information preceding Step 20 of the JPM incorrectly references MCR Alarm ***105-B2***. Should be MCR Alarm ***106 B-2***. • Item 6 in the Simulator Setup Instructions states that GP-2, Appendix 3, is completed up to and including Step 3.4.6.k.1.c. Item 2 of the Initiating Cue states that GP-2, Appendix 3, is complete up to and including Step 3.4.6.k. Is this equivalent information? Reconcile this difference. • Add a Cue at the start of the JPM to provide a marked up copy of GP-2, Appendix 3, completed up to and including Step 3.4.6.k **OR** Step 3.4.6.k.1.c, depending upon resolution of the previous bullet. • Correct the numbering issue on the Individual Briefing Sheet at the back end of the JPM document.

													LIMERICK: • Revised Task Standard as requested. • Corrected note from 105 to 106. • Corrected procedure number from **GP-2 App. 3** to **1GP-2 App. 3** Revised step to which procedure should be marked to 3.4.6.7.k.1.c. Noted that step is not correct in procedure, it should be 3.4.6.7.m.1.c but exists as 3.4.6.7.k.1.c. • Cue added to start of JPM to provide a copy of **1GP-2 Appendix 3.** • Corrected the numbering issue on the Individual briefing sheet at the back end of the JPM document. **Post NRC Walk-through** • Corrected valve number in Task Standard from HV-005-116 to HV-005-115. • Corrected Initial Condition #2 procedure reference from 1GP-2, App. 2 to 1GP-2, App. 3. • Added initial condition #3: "No internal maintenance has been performed on the Main Turbine and the Turbine Start-up Team has been assembled." • Added initial condition #8: "An EO is stationed to check bearing flows per S29.9.A and listen for bearing rubs." • Added to the end of Initiating Cue #1: "…starting at step 3.4.7."
Sim D LOJPM3515	4 205000 K1.15 Shutdown Cooling Flow Adjustment	3		X								~~E~~ S	**NRC**: • JPM Step 1 Cue incorrectly references Step 4.4.23.5 of S51.8.B. Should be 4.4.25.5. **LIMERICK**: • Revised Step 1 Cue to reference step 4.4.25.5 of S51.8.B. **Post NRC Walk-through** • Corrected Initial Condition #2 from: "0A' RHRSW pump…" to "'0C' RHRSW pump…"
Sim E LOJPM3070	5 223001 A4.07 Vent Containment Using HCVS	2		X								~~E~~ S	**NRC**: • Add a Cue at the start of the JPM to provide the applicant a copy of T-341. **LIMERICK**: • Added Cue at the start of the JPM to provide a copy of T-341 to applicant.

													Post NRC Walk-through • Added Simulator Setup Instruction #3: "Stage a stopwatch at HCVS panel." • Added Cue for Element 15: "**CUE:** "I hear pneumatic flow to the valve." • Revised Element 10 Cue from: **CUE**: If requested from EO, "Pressure on PI-057V-132 increased and then decreased to 0 psig." to **CUE**: If requested from EO, "Pressure on PI-057V-132 went up and then lowered to 0 psig." • Changed designation from Alternate Path YES to Alternate Path NO.
Sim F LOJPM3031	7 212000 K4.05 Scram Channel A1 and A2 Functional Test	2						X				~~U~~ S	**NRC**: • JPM is intended to test both A1 and A2 Manual Scram Channels. JPM is currently written to test only the A1 Channel. • Task Standard and Initiating Cue differ in scope. Task Standard is written for satisfactory completion of ST-6-071-306-1, Section 4.3, whereas the Initiating Cue directs performance of Channels A1/A2 RPS Manual Scram Channel Functional Test. • Add a Cue at the start of the JPM to provide the applicant a copy of ST-6-071-306-1. • Editorial: Delete the word ***"to"*** in the Task Standard. **LIMERICK**: • JPM revised to test both A1 and A2 Manual Scram Channels. • Task Standard revised for satisfactory completion of ST-071-306-1 • Cue added to provide candidate with copy of ST-6-071-306-1. • Task Standard has been revised.
Sim G LOJPM3028	8 400000 A2.01 Supply RECW to the Drywell Coolers	2										S	
Sim H LOJPM3531	9 261000 A4.03 Standby Gas Treatment Train Swap	3			X			X				~~E~~ S	**NRC**: • Enhance the Task Standard by providing the context within which the 'A' SGTS Filter Train was placed in service and then subsequently removed; *i.e., due to trip of the 0AV163 SGTS Fan.*

													• Editorial: JPM Step 4 Performance Standard designation for the Filter Inlet Damper should be HV-076-011A. The "0" is missing from the identifier. • Evaluator Note preceding JPM Step 6 requires a comma ***before " steps 4.5.5"*** and another comma ***after "4.5.7."*** to improve the readability of this statement. • *Appears that JPM Step 14 to place HS-076-013B to "OPEN" to manually start the 'B' SGTS Train should be designated as a Critical Step.* **LIMERICK** • Revised Task Standard to read: *"'A' SGTS Fan and Filter Train are placed in service and then removed from service due to a trip of the 'A' SGTS Fan. The 'B' SGTS Fan and Filter Train are then placed in service."* • JPM Step 4 change made as requested. • In JPM Step 6, placed commas in Note as requested. • Designated JPM Step 14 as a Critical Step. (now Step 15)
IP-I LOJPM2275	4 217000 A2.01 T-242 Defeat of HPCI/RCIC Test Return and Injection Valve Isolation Logic	3		X				X				~~E~~ S	**NRC**: • Task Standard is deficient. Task Standard states that T-242 is performed to defeat the auto closing of the Test Return Valve. JPM as written, defeats the Test Return and Injection Valve Isolation Logic for both the HPCI and RCIC Systems. • NOTE prior to Step 1 of the JPM adds little value. Cueing information should not be provided within the context of a NOTE. In addition, the Cues contained therein are redundant to the Examiner Cues already provided in Steps 1 and 2 of the JPM. Separately, the ***IF-THEN*** guidance provided in the NOTE has no bearing on the conduct of the NRC Exam. NOTE should therefore be deleted. *If desired, the existing Cue in Step 2 of the JPM may be replaced with the Cue provided in the NOTE pertaining to possession of the "**T-242 equipment container."*** **LIMERICK**: • Task Standard revised to read: *"T-242 performed by installing jumpers in *0C620, *0C621 to defeat the HPCI/RCIC Test Return and Injection Valve Isolation Logic."* • Deleted Note prior to JPM Step 1.

IP-J LOJPM2210	7 212000 A4.17 Manual Isolation and Vent of the Scram Air Header	3		X				X				~~E~~ S	**NRC**: • Task Standard is deficient. Identify the means by which the scram air header is depressirized. • NOTE prior to Step 1 of the JPM adds little value. Cueing information should not be provided within the context of a NOTE. In addition, the Cue contained therein is redundant to the Examiner Cue already provided in Step 1 of the JPM. Separately, the ***IF-THEN*** guidance provided in the NOTE has no bearing on the conduct of the NRC Exam. NOTE should therefore be deleted. *If desired, the existing Cue in Step 1 of the JPM may be replaced with the Cue provided in the NOTE pertaining to possession of the "**T-216 equipment container."*** • Enhance the Cue in Step 1 of the JPM by providing guidance to give the applicant a copy of T-216 when knowledge of the correct location for obtaining the procedure is demonstrated. **LIMERICK**: • Revised Task Standard to read: *" Satisfactorily complete actions dictated by T-216 to depressurize the Scram air header."* • Note before JPM Step 1 deleted. • Revised JPM Step 1. Broke into two JPM Steps to locate the correct procedure and then the associated tools required. **Post NRC Walk-through** • Change task standard from: *"Satisfactorily complete actions dictated by T-216 to depressurize the Scram air header."* to *"Satisfactorily complete actions dictated by T-216 to isolate and depressurize the Scram air header."*

IP-K LOJPM2232	8 286000 A2.08 T-244 Diesel Drive Fire Pump Manual Start	1		X	X			X				~~U~~ S	**NRC**: • LOD=1. JPM does not provide sufficient basis for evaluating an applicant's understanding and ability to safely operate the plant. The two Critical Steps which have been scripted require placing a control switch in Manual and depressing a single pushbutton to start the Diesel Driven Fire Pump (DDFP). These actions are part of the same bulleted procedure step in T-244. *Suggest revising the JPM to have a successful start of the DDFP, followed by indications of severe cavitation, requiring the applicant to take prompt action to (a) secure the pump, and (b) start the Backup Diesel Driven Fire Pump IAW Step 4.2 guidance. If this or some other acceptable alternative is not a plausible solution for raising the Task LOD, then the JPM should be replaced. Note that any changes made will have to be evaluated against the Type Codes specified in Form ES-301-2 to ensure compliance with established Criteria (i.e., Modified/New vs Direct / Alt Path, / Safety Function, etc).* • *Identify Step 5 of the JPM as a Critical Step to ensure RPV injection is established IAW T-244, Step 4.3. Revise the Task Standard and the Initiating Cue to appropriately address the RPV Injection component of this JPM Task.* • NOTE prior to Step 1 of the JPM adds little value. Cueing information should not be provided within the context of a NOTE. In addition, the Procedure Cue contained therein is redundant to the Examiner Cue already provided in Step 1 of the JPM. Separately, the ***IF-THEN*** guidance provided in the NOTE has no bearing on the conduct of the NRC Exam. NOTE should therefore be deleted. • Add a stand-alone Examiner Cue to the Element section of Step 2 of the JPM, for obtaining the necessary equipment. *Suggest using the Cue provided in the aforementioned NOTE pertaining to possession of the "**T-244 equipment container."*** **LIMERICK**: • Revised JPM to begin by attempting to start the Motor Driven Fire Pump, then proceeding to start the Diesel Driven Fire

													Pump which starts and then ceases to operate. The candidate must then proceed to Backup Diesel Driven Fire Pump and start it. After the successfully starting the Backup Diesel Driven FP, the candidate is expected to notify the MCR to open the associated LPCI injection valve to commence RPV injection. • As modified, JPM Step 6 (formally Step 5) is now Critical Step. The task standard and initiating cue have been modified appropriately. • Cue prior to JPM Step 1 has been deleted as requested. • A new JPM Step 1 was inserted for the candidate to obtain the appropriate procedure. The information about requiring additional equipment was not needed as it pertains only to a section of T-244 not executed in this JPM.

Instructions for Completing This Table:

Check or mark any item(s) requiring a comment and explain the issue in the space provided using the guide below.

1. Check each JPM for appropriate administrative topic requirements (COO, EC, Rad, and EP) or safety function requirements and corresponding K/A. Mark in column 1. (ES-301, D.3 and D.4)

2. Determine the level of difficulty (LOD) using an established 1–5 rating scale. Levels 1 and 5 represent an inappropriate (low or high) discriminatory level for the license that is being tested. Mark in column 2 (Appendix D, C.1.f)

3. In column 3, "Attributes," check the appropriate box when an attribute is **not met**:
   - The initial conditions and/or initiating cue is clear to ensure the operator understands the task and how to begin. (Appendix C, B.4)
   - The JPM contains appropriate cues that clearly indicate when they should be provided to the examinee. Cues are objective and not leading. (Appendix C, D.1)
   - All critical steps (elements) are properly identified.
   - The scope of the task is not too narrow (N) or too broad (B).
   - Excessive overlap does not occur with other parts of the operating test or written examination. (ES-301, D.1.a, and ES-301, D.2.a)
   - The task performance standard clearly describes the expected outcome (i.e., end state). Each performance step identifies a standard for successful completion of the step.
   - A valid marked up key was provided (e.g., graph interpretation, initialed steps for handouts).

4. For column 4, "Job Content," check the appropriate box if the job content flaw **does not meet** the following elements:
   - Topics are linked to the job content (e.g., not a disguised task, task required in real job).
   - The JPM has meaningful performance requirements that will provide a legitimate basis for evaluating the applicant's understanding and ability to safely operate the plant. (ES-301, D.2.c)

5. Based on the reviewer's judgment, is the JPM as written (U)nacceptable (requiring repair or replacement), in need of (E)nhancement, or (S)atisfactory? Mark the answer in column 5.

6. In column 6, provide a brief description of any (U)nacceptable or (E)nhancement rating from column 5.

Save initial review comments and detail subsequent comment resolution so that each exam-bound JPM is marked by a (S)atisfactory resolution on this form.

Facility: LIMERICK NUCLEAR POWER PLANT					Scenario: 1 (SEG-5006E)			Exam Date: July 12, 2021	
1 Event	2 Realism /Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scenario Overlap	9 U/E/S	10 Explanation
1 – Perform Drywell Mixing Fan ST								~~E~~ ~~S~~	***Normal Event*** **NRC**: • Add the '1A1' ASD Cooling Pump Trip to the D1 Event Description (similar to what was done in the D2 Header Description). **LIMERICK**: • Revised D1 as requested. **Post NRC Walk-through** Added note that PPC computer alarms will sound when fans are stopped
2 – Containment Leak Detector Inadvertent Isolation					TS			S	
3 – #3 APRM Fails Upscale								S	
4 – Low Pressure FWH Level Transient								S	***Reactivity Manipulation***
5 – '1A' Loss of ASD Cooling					TS			S	
6 – 1B Recirc Pump Trip								S	
7 – Loss of High Pressure Injection / LOCA Inside Containment						CT1 CT2		~~E~~ S	***Major Event*** **NRC**: • *Clearly identify the all Critical Task action statements in the D2 so that they stand out from the other action items (i.e., bold, underline, highlight, different color, etc.). Ensure that the Critical Task identifier (i.e., CT-1, CT-2) is annotated as well to distinguish the Critical Tasks.* • Directing Drywell Sprays IAW T-225 is incorrectly identified as a CT on Page 43 of 49 of the D2. Remove this CT reference. **LIMERICK**: • Highlighted Critical Task action statement rows in the D2 to make them stand out as requested. • Removed errant Drywell Spray critical task designation on Page 43 of D2.
8 – RCIC Discharge Valve Fails to							X	~~E~~ S	***2018 NRC Exam; Scenario SEG-3005E, Event 6 (Previous 2 NRC Exams)*** **NRC**: • Target Quantitative Attribute Table included with the D1 lists *"RCIC Controller in*

Auto Open									*AUTO Failure"* as a Malfunction after EOP Entry. This event was replaced with *"RCIC Discharge Valve Fails to Auto Open."* Table requires update. • D1 and D2 Target Quantitative Attribute Tables are both missing Event 6, *"1B Reactor Recirc Pump Trip,"* in the Abnormal Events count. This results in an increase from 3 to 4 for the Abnormal Event Totals for this scenario. Note that the Target Quantitative Attribute Table in Form ES-301-4 will be impacted by this change as well. Event 6 is reflected in the Form ES-301-5 *"I/C"* Count Totals. • D2 Event Header Description states *"RCIC Discharge Valve Fails Open Automatically."* This is incorrect. Should read *"RCIC Discharge Valve Fails to Auto Open."* same as the D1. **LIMERICK**: • Updated Target Quantitative Attributes table with *"RCIC Discharge Valve Fails to Auto Open."* • Added Event 6, *"1B Reactor Recirc Pump Trip"* to both D1 and D2 Target Quantitative Attribute Tables. • Revised D2 Header Description as requested.
9 – '1M' Tailpipe Break with 50% Flow Into Air Space						CT2		~~U~~ S	**NRC**: • D2 Event Description *"1M SRV Fails to Open,"* is incorrect. Should read the same as the D1; i.e., *"1M Tailpipe Break at 50%."* In addition, the D2 has also been scripted for the *"Failure of '1M' SRV to Open."* This is incorrect as well. • *Clearly identify the Critical Task action statement in the D2 so that it stands out from the other action items (i.e., bold, underline, highlight, different color, etc.). Ensure that the Critical Task identifier (i.e., CT-2) is annotated as well to distinguish the Critical Task.* **LIMERICK**: • Revised D2 Header Description as requested. D2 Script revised to support the '1M' SRV Tailpipe Break at 50% flow into the SP airspace. • Highlighted Critical Task action statement rows in the D2 to make them stand out as requested.
9	**0**	**0**	**0**	**0**	**2**	**2**	**8**	**~~E~~ S**	

Facility: LIMERICK NUCLEAR POWER PLANT					Scenario: 2 (SEG-6215E)			Exam Date: July 12, 2021	
1 Event	2 Realism/ Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scenario Overlap	9 U/E/S	10 Explanation
1 – Withdrawal Control Rods and Restore Power to 100%								S	***Reactivity Manipulation***
2 – '1B' RBM INOP Failure					~~TS~~			~~E~~ S	**NRC**: • D2 indicates that no TS Actions are required for the "RBM INOP Failure" based on existing plant conditions (i.e., Thermal Power and MCPR). The LCO is therefore *"Tracking"* vs *"Active,"* and cannot be included in the total TS count. No impact to the scenario given that two other valid TSs are being evaluated, ensuring minimum scenario requirements are met. Ensure that the TS reference is removed from the *"EVENT TYPE"* Column on the D1. **LIMERICK**: • Removed TS reference for this event.
3 – Loss of ~~10-Y202~~ D14 Bus					TS			~~E~~ S	**NRC**: • Tech Spec information not scripted in the D2. **LIMERICK**: • Revised event to a Loss of D14 BUS and added Tech Spec information. Subsequent evaluation revealed that there are no TSs associated with the 10-Y202 Instrument Bus. **Post NRC Walk-through** • Revised assessment item to allow placing either the 1A or 1B Drywell Chiller.
4 – CRD Pump Trip Due to Clogged Strainer Suction					TS			S	**Post NRC Walk-through** • Corrected Lead Evaluator note at end of event to state: *"The scenario may proceed to the next event ("1C" RPS Rx Level Transmitter Fails Low with a Failure to Half Scram / OT-117) after the CRD Pump is re-started and the SRO has determined Tech Spec implications."* • Added malfunctions and assessment section for inoperable HCU accumulators and associated TS evaluation.
5 – '1C' RPS Rx Lvl Xmtr Fails Low with Failure to Half Scram					TS			~~E~~ S	**NRC**: • Tech Spec information not scripted in the D2. **LIMERICK**: • Revised event to include Tech Spec information.

6 – Hydraulic ATWS and SLC Line Rupture						CT1 CT2 CT3		~~E~~ S	***Major Event*** **NRC**: • *Clearly identify the all Critical Task action statements in the D2 so that they stand out from the other action items (i.e., bold, underline, highlight, different color, etc.). Ensure that the Critical Task identifiers (i.e., CT-1, CT-2, CT-3) are annotated as well to distinguish the Critical Tasks.* **LIMERICK**: • Highlighted Critical Task action statement rows in the D2 to make them stand out as requested.
7 – 'B' Loop RHRSW Pump Trip on Overcurrent								~~E~~ S	**NRC**: • Target Quantitative Attribute Table included with the D2 lists *"RHRSW Trip"* as a Malfunction after EOP Entry. This is incorrectly stated; should be *"B Loop RHRSW Pump Trips."* D2 Table requires update. Note that the associated D1 Table is accurate. • D2 Event Header Description states *"RHRSW Pump Trip."* This is incorrectly stated; should be *"B Loop RHRSW Pump Trips."* **LIMERICK**: • Revised Target Quantitative Attribute Table in D2 to read "B Loop RHRSW pump trips" as requested. • D2 Revised as requested.
8 – Turbine High Vibration Requiring Manual Turbine Trip / Bypass Valves Fail Closed								~~E~~ S	**NRC**: • D2 Event Header Description states *"Main Turbine Vibrations / Turbine Trip / Bypass Valve Closure."* This is incorrectly stated; should be *"Main Turbine High Vibration Requiring Manual Turbine Trip / Bypass Valves Fail Closed."* **LIMERICK**: • D2 revised as requested.
8	**0**	**0**	**0**	**0**	**3**	**3**	**8**	**~~E~~ S**	

Facility: LIMERICK NUCLEAR POWER PLANT					Scenario: 3 (SEG-2158E) (Low Power)			Exam Date: July 12, 2021	
1 Event	2 Realism/ Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scenario Overlap	9 U/E/S	10 Explanation
1 – Continue Raising Power and RPV Pressure								S	***Reactivity Manipulation*** **Post NRC Walk-through** • Corrected assessment item to reference Attachment 13 instead of Attachment 15 • Corrected assessment procedure step from S73.1.A 4.3.3 to S73.1.A 4.2.3
2 – Stuck Control Rod (42-43)								S	**Post NRC Walk-through** • Added information in Evaluator Note that after Drive Water pressure 1 time the stuck rod malfunction should be deleted.
3 – '1D' RHR Pump Suction Leak					TS			~~E~~ S	**NRC**: • D2 needs to state that the LCO is *"ENTERED,"* not just referenced. **LIMERICK**: • Revised D2 as requested.
4 – Loss of Div I DC					TS			~~E~~ S	**NRC**: • *For the Loss of Div I DC Event, need to specifically identify all the Active LCOs that must be entered by the SRO applicant, not just those TSs that may be referenced.* **LIMERICK**: • Revised D2 as requested. **Post NRC Walk-through** • Added more information in the report on the status of the loss of the DC panel so that is communicated it will not be quickly returned to service. • Added ARC 120 G-5 to list of ARCs to be referenced. • Added assessment item for entry into GP-21,TECH SPEC 3.0.3 GUIDANCE, once TS 3.0.3 entry is recognized. • Imported TS listing for evaluation from E-1FA
5 – Small Coolant Leak in Drywell								S	
6 – RPS 'A' Fails to Scram (ARI Successful)						CT1		~~E~~ S	**NRC**: • *Clearly identify the Critical Task action statement in the D2 so that it stands out from the other action items (i.e., bold, underline, highlight, different color, etc.). Ensure that the Critical Task identifier (i.e., CT-1) is annotated as well to distinguish the Critical Task.* **LIMERICK**: • Revised D2 as requested.

7 – Steam Leak in Drywell								S	***Major Event***
8 – Downcomer Break Requiring Emergency Blowdown on PSP						CT2		~~E~~ S	**NRC**: • *Clearly identify the Critical Task action statement in the D2 so that it stands out from the other action items (i.e., bold, underline, highlight, different color, etc.). Ensure that the Critical Task identifier (i.e., CT-2) is annotated as well to distinguish the Critical Task.* **LIMERICK**: • Revised D2 as requested. **Post NRC Walk-through** • Added remote manipulation of ADS valves from Aux Equipment Room.
9 – '1B' RHR Pump Trip on Overcurrent								~~E~~ S	**NRC**: • D2 Simulator Operator Instructions state *"Ensure Trigger #6 actuates to trip '1B' RHR Pump when the Drywell Pressure reaches 10 psig"*. Event Summary Description for Event 9 states *"When Suppression Pool Pressure exceeds 7.5 psig with the permissive to spray the Drywell, the '1B' RHR Pump will trip."* Reconcile this discrepancy and determine what impact, if any, this has on the conduct of the scenario. • Target Quantitative Attribute Table included with the D2 lists *"1B RHR Pump Fails to Start"* as a Malfunction after EOP Entry. This is incorrect; should be *"1B RHR Pump Trips on Overcurrent."* D2 Table requires update. Note that the associated D1 Table is accurate. **LIMERICK**: • Event 9 descriptions in the D2 and D1 were revised to state, *"When Drywell pressure exceeds 10 psig, the '1B' RHR Pump will trip."* This is how the automatic trigger was built to execute in the D2 scenario guide. • Target Quantitative Attribute Table included with the D2 revised as requested. **Post NRC Walk-through** • Added driver prompts and reports to prevent the crew from using T-225 to Spray the Drywell with 1C LPCI. The MOV breaker will not close in to allow valve alignment and the handwheel is frozen in place..
9	**0**	**0**	**0**	**0**	**2**	**2**	**9**	**~~E~~ S**	

Facility: LIMERICK NUCLEAR POWER PLANT						Scenario: 4 (SEG-3158E) (SPARE) *INFORMATION REDACTED*			Exam Date: July 12, 2021
1 Event	2 Realism /Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scenario Overlap	9 U/E/S	10 Explanation
[redacted]									
[redacted]									
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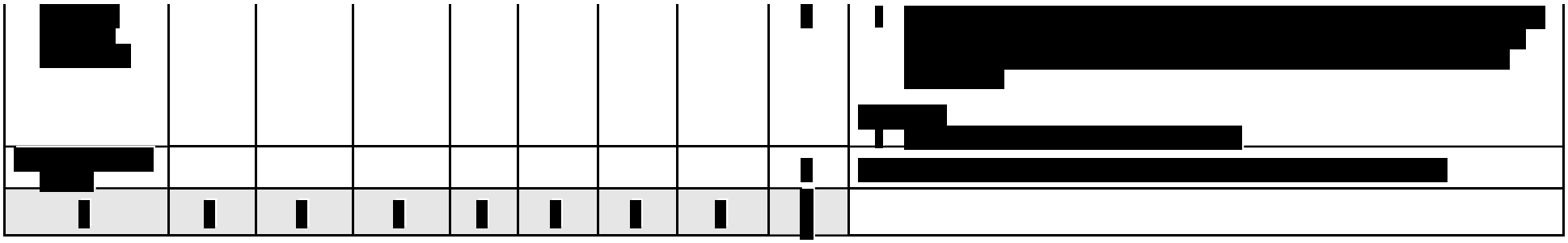

Instructions for Completing This Table:

Use this table for each scenario for evaluation.

2 Check this box if the events are not related (e.g., seismic event followed by a pipe rupture) **OR** if the events do not obey the laws of physics and thermodynamics.

3, 4 In columns 3 and 4, check the box if there is **no** verifiable or required action, as applicable. Examples of required actions are as follows: (ES-301, D.5f)

- opening, closing, and throttling valves
- starting and stopping equipment
- raising and lowering level, flow, and pressure
- making decisions and giving directions
- acknowledging or verifying key alarms and automatic actions (Uncomplicated events that require no operator action beyond this should **not** be included on the operating test unless they are necessary to set the stage for subsequent events. (Appendix D, B.3))

5 Check this box if the level of difficulty is **not** appropriate.

6 Check this box if the event has a TS.

7 Check this box if the event has a critical task (CT). If the same CT covers more than one event, check the event where the CT started **only.**

8 Check this box if the event overlaps with another event on any of the last two NRC examinations. (Appendix D, C.1.f)

9 Based on the reviewer's judgment, is the event as written (U)nacceptable (requiring repair or replacement), in need of (E)nhancement, or (S)atisfactory? Mark the answer in column 9.

10 Record any explanations of the events here.

In the shaded boxes, sum the number of check marks in each column.

- In column 1, sum the number of events.
- In columns 2–4, record the total number of check marks for each column.
- In column 5, based on the reviewer's judgement, place a checkmark only if the scenario's LOD is not appropriate.
- In column 6, TS are required to be ≥ 2 for each scenario. (ES-301, D.5.d)
- In column 7, preidentified CTs should be ≥ 2 for each scenario. (Appendix D; ES-301, D.5.d; ES-301-4)
- In column 8, record the number of events not used on the two previous NRC initial licensing exams. A scenario is considered unsatisfactory if there is < 2 new events. (ES-301, D.5.b; Appendix D, C.1.f)
- In column 9, record whether the scenario as written (U)nacceptable, in need of (E)nhancement, or (S)atisfactory from column 11 of the simulator scenario table.

Facility: LIMERICK NUCLEAR POWER PLANT **Exam Date: July 12, 2021**

Scenario	1 Event Totals	2 Events Unsat.	3 TS Total	4 TS Unsat.	5 CT Total	6 CT Unsat.	7 % Unsat. Scenario Elements	8 U/E/S	11 Explanation
1	9	1	2	0	2	0	7.7%	~~E~~ S	*(SEG-5006E)* D2 Event Description *"1M SRV Fails to Open,"* is incorrect. Should read the same as the D1; i.e., *"1M Tailpipe Break with 50%.flow Into SP Airspace,"* In addition, the D2 has also been scripted for the *"Failure of '1M' SRV to Open."* This is incorrect as well.
2	8	0	3	0	3	0	0%	~~E~~ S	*(SEG-6215E)*
3	9	0	2	0	2	0	0%	~~E~~ S	*(SEG-2158E)*
4	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	*(SEG-3158E)* ***SPARE SCENARIO – INFORMATION REDACTED***

Instructions for Completing This Table:

Check or mark any item(s) requiring comment and explain the issue in the space provided.

1, 3, 5 For each simulator scenario, enter the **total** number of events (column 1), TS entries/actions (column 3), and CTs (column 5). This number should match the respective scenario from the event-based scenario tables (the sum from columns 1, 6, and 7, respectively).

2, 4, 6 For each simulator scenario, evaluate each event, TS, and CT as (S)atisfactory, (E)nhance, or (U)nsatisfactory based on the following criteria:

a. Events. Each event is described on a Form ES-D-2, including all switch manipulations, pertinent alarms, and verifiable actions. Event actions are balanced between at-the-controls and balance-of-plant applicants during the scenario. All event-related attributes on Form ES-301-4 are met. Enter the total number of unsatisfactory events in column 2.

b. TS. A scenario includes at least two TS entries/actions across at least two different events. TS entries and actions are detailed on Form ES-D-2. Enter the total number of unsatisfactory TS entries/actions in column 4. (ES-301, D.5d)

c. CT. Check that a scenario includes at least two preidentified CTs. This criterion is a target quantitative attribute, not an absolute minimum requirement. Check that each CT is explicitly bounded on Form ES-D-2 with measurable performance standards (see Appendix D). Enter the total number of unsatisfactory CTs in column 6.

7 In column 7, calculate the percentage of unsatisfactory scenario elements: $\left(\frac{2+4+6}{1+3+5}\right)100\%$

8 If the value in column 7 is > 20%, mark the scenario as (U)nsatisfactory in column 8. If column 7 is ≤ 20%, annotate with (E)nhancement or (S)atisfactory.

9 In column 11, explain each unsatisfactory event, TS, and CT. Editorial comments can also be added here.

Save initial review comments and detail subsequent comment resolution so that each exam-bound scenario is marked by a (S)atisfactory resolution on this form.

Facility: LIMERICK NUCLEAR POWER PLANT **Exam Date: July 12, 2021**

OPERATING TEST TOTALS

	Total	Total Unsat.	Total Edits	Total Sat.	% Unsat.	Explanation
Admin. JPMs	9	2	7	0		
Sim/In-Plant JPMs	11	2	7	2		
Scenarios	4	0	4			
Op. Test Totals:	24	4	17	3	16.7	

Instructions for Completing This Table:

Update data for this table from quality reviews and totals in the previous tables and then calculate the percentage of total items that are unsatisfactory and give an explanation in the space provided.

1. Enter the total number of items submitted for the operating test in the "Total" column. For example, if nine administrative JPMs were submitted, enter "9" in the "Total" items column for administrative JPMs. For scenarios, enter the total number of simulator scenarios.

2. Enter the total number of (U)nsatisfactory JPMs and scenarios from the two JPMs column 5 and simulator scenarios column 8 in the previous tables. Provide an explanation in the space provided.

3. Enter totals for (E)nhancements needed and (S)atisfactory JPMs and scenarios from the previous tables. This task is for tracking only.

4. Total each column and enter the amounts in the "Op. Test Totals" row.

5. Calculate the percentage of the operating test that is (U)nsatisfactory (Op. Test Total Unsat.)/(Op. Test Total) and place this value in the bolded "% Unsat." cell.

   Refer to ES-501, E.3.a, to rate the overall operating test as follows:
   - satisfactory, if the "Op. Test Total" "% Unsat." is ≤ 20%
   - unsatisfactory, if "Op. Test Total" "% Unsat." is > 20%

6. Update this table and the tables above with post-exam changes if the "as-administered" operating test required content changes, including the following:
   - The JPM performance standards were incorrect.
   - The administrative JPM tasks/keys were incorrect.
   - CTs were incorrect in the scenarios (not including post scenario critical tasks defined in Appendix D).
   - The EOP strategy was incorrect in a scenario(s).
   - TS entries/actions were determined to be incorrect in a scenario(s).