

Facility: PERRY NUCLEAR POWER PLANT											Exam Date: FEBRUARY 8-19, 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		
General Comments			X						X				-- NRC: Each Step, including Critical Steps, should have a performance standard. In the Initiating Cue, state that the Unit Supervisor either "directs you" or a designated "Reactor Operator" to perform the task. (Especially for tasks which may be performed by both ROs and SROs.) Response: Performance standards for each step verified for all JPMs, and performers designated as appropriate.
Calculate Avg. DW Temperature [RO A1.1] (ADM-034-RO)	Conduct Of Operations-1 2.1.18	2	X						X				E S NRC: Modify Task Standard and Initiating Cue to support identifying an EOP entry condition as a critical step. Correct Step 5 Critical Step description to read "Candidate calculates Average Lower DW temperature to be >145 degrees F and . . .". Response: Task Standard and Initiating Cue modified; wording in Step 5 corrected. JPM is now SAT.
Determine Adequacy of ADHR system [RO A1.2] (ADM-035-RO)	Conduct Of Operations-2 2.1.20	3											S NRC: None. Response: JPM is SAT as written.
Determine Boundary Isolation Conditions [RO A2] (ADM-026-RO)	Equipment Control 2.2.41 and 2.2.15	3											S NRC: None. Response: JPM is SAT as written.
Select NLO for LHRA Task [RO A3] (ADM-004-RO)	Radiation Control 2.3.12	2		X									E S NRC: Remove Area dose rates from I/Cs. Provide Survey maps to applicant for determining total dose to perform task. Response: I/Cs modified and Survey Maps provided. JPM is now SAT.

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			I/C Focus	Cues	Critical Steps	Scope (N/B)	Overlap	Perf. Std.	Key	Minutia	Job Link		
Assess Active SRO License Requirements [SRO A1.1] (ADM-028-SRO)	Conduct Of Operations-2 2.1.4 and 2.1.5	3			✘					✘		U S	<p><u>NRC</u>: Correct the Task Standard to match the SRO level ADMIN JPM; "Review proposed work schedules . . . to maintain an Active SRO license per NOBP-TR-1271, Operator License Administration."</p> <p>Steps 2, 4, 5, and 6 should be characterized as Critical Steps based on meeting the given Task Standard.</p> <p><u>Response</u>: Task Standard modified and Steps 2, 4, 5, & 6 designated as Critical Steps.</p> <p>JPM is now SAT.</p>
Respond to Refuel Bridge PLC Failure (Fuel Suspended) [SRO A1.2] (ADM-017-SRO)	Conduct Of Operations-1 2.1.36 and 2.1.42	2		✘								E S	<p><u>NRC</u>: Step 2 Instructor Cue is inappropriate coaching. The examinee must determine/identify the correct location to place the fuel bundle IAW the procedure Section.</p> <p>Recommend adding a final step to reposition refueling platform as directed by procedure section.</p> <p><u>Response</u>: Instructor Cue removed; Step added to determine final position of platform.</p> <p>JPM is now SAT.</p>
Determine Boundary Isolation Conditions and FP Funct. Specs. [SRO A2] (ADM-026-SRO)	Equipment Control 2.2.41 and 2.2.38	2	✘							✘		E S	<p><u>NRC</u>: Task Standard not specific enough to clearly determine appropriate Critical Steps. Modify Task Standard and Initiating Cue to support identified critical steps.</p> <p>Characterize Step 6 to be Non-Critical based on the Completion Time of "NONE" for the Functional Specification required action.</p> <p><u>Response</u>: Task Standard and Initiating Cue modified; redesignated Step 6 as non-critical.</p> <p>JPM is now SAT.</p>
Determine Required Actions, per ODCM, for Non-Functional Rad Monitor [SRO A3] (ADM-034-SRO)	Radiation Control 2.3.15	3										S	<p><u>NRC</u>: None.</p> <p><u>Response</u>: JPM is SAT as written.</p>

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			I/C Focus	Cues	Critical Steps	Scope (N/B)	Overlap	Perf. Std.	Key	Minutia	Job Link		
Review EAL Declaration and Make Offsite Notification [SRO A4] (ADM-323-SRO)	Emergency Plan 2.4.43	3	X									E S	<p><u>NRC:</u> The JPM states that it is time critical, but no time limit is defined. Modify I/Cs to state that the EAL Declaration was made 3 minutes ago to support a Time Critical JPM.</p> <p>Add Specific notes to mark Time Critical portions.</p> <p><u>Response:</u> Initial Conditions modified as requested; Time Critical portion identified in Step 4. JPM is now SAT.</p>

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Simulator/In-Plant JPMs	1 Safety Function 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		
Start Idle Rx Recirc Pump; Respond to Hi Vibes [Alt Path] [SIM a] (Sim B33-504-RO)	SF-1 202001 – A2.03	3								✘			E S NRC: The task standard is overly broad. Modify Task Standard to support identified critical steps to secure affected pump. Response: Task Standard modified as requested. JPM is now SAT.
Perform SVI-E21-T2001 to Stroke Test E21-F001 [SIM b] (Sim E21-001-RO)	SF-2 209001 – A4.02	2	✘										E S NRC: Modify Initiating Cue to support the Task Standard and identified critical steps to stroke test E21-F001. Response: Task Standard modified as requested. JPM is now SAT.
While Performing SVI for Main Turbine BPVs, Respond to Failure of Both Pressure Regs [Alt Path] [SIM c] (Sim C85-501-RO)	SF-3 241000 – A4.06	3			✘					✘			U S NRC: Task Standard is overly broad. Modify Task Standard to support identified critical steps to close the MSIVs. Step 3 and Step 5 should be critical steps. Remove the 2 nd Instructor Cue from Step 5; as it is inappropriate coaching. Response: Task Standard modified and Steps 3 & 5 designated as Critical. 2 nd cue removed from Step 5. JPM is now SAT.
Restart a RWCU Pump After an Inadvertent Trip [SIM d] (Sim G33-003-RO)	SF-4 204000 – A4.01	2	✘										E S NRC: Modify I/Cs to indicate RCS temperature to support JPM steps marked as N/A. Response: I/Cs modified as requested. JPM is now SAT.
Shift RHR Loop A from Cont. Spray to SPC; Realign for LPCI Inject on Loss of RHR Loop B [Alt Path] [SIM e] (Sim E12-507-RO)	SF-5 226001 – A2.20	3								✘			E S NRC: Modify Task Standard to support identified critical steps to realign for LPCI injection. Modify Terminating Cue to reflect the RPV level band provided as a cue in Step 4 (150" to 219"). Response: Task Standard modified as requested; termination cue corrected. JPM is now SAT.

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Simulator/In-Plant JPMs	1 Safety Function 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		
Bypass a Control Rod Position in RGDS for an Inoperable Rod [SIM f] (Sim C11-010-RO)	SF-7 201005 - A3.03	2										S	<u>NRC:</u> Designate which operator is performing the task. <u>Response:</u> JPM is SAT.
Shift NCC Pumps and Respond to Trip of a Running Pump [Alt Path] [SIM g] (Sim P43-502-RO)	SF-8 400000 – A2.01	3										S	<u>NRC:</u> Designate which operator is performing the task. <u>Response:</u> JPM is SAT.
Swap Trains in Single Train DW Ventilation Mode [Alt Path] [SIM h] (Sim M13-501-RO)	SF-9 288000 – A4.01	3										S	<u>NRC:</u> None. <u>Response:</u> JPM is SAT as written.
Start RCIC & Control RPV Level from Div 1 RSDP [IP i] (IP C61-110-RO)	SF-2 295016 – AA1.06, AA2.02	3										S	<u>NRC:</u> None. <u>Response:</u> JPM is SAT as written.
S/U Div 1 ATWS Inverter and Transfer UPS to Inverter [Alt Path] [IP j] (IP R14-501-RO)	SF-6 262002 – K4.01	3										S	<u>NRC:</u> None. <u>Response:</u> JPM is SAT as written.
Align LPCS Fast Firewater for RPV Level Control [IP k] (IP P54-004-RO)	SF-8 286000 – A1.05	3	×						×			E S	<u>NRC:</u> Task Standard overly broad. Modify Task Standard to align RPV injection IAW ONI-SPI-A8. <u>Response:</u> Task Standard modified as requested. JPM is now SAT.

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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.

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Scenario: 2 (Free Sample) (100% Rx Pwr)

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 Main Turbine Control Valve Exercise								S	
2 APRM H Flow Card Fails to 50%					X			S	
3 Earthquake Exceeds OBE; Initiate Normal Shutdown; Start all ESW loops							X	S	NRC: 2017 NRC ILE Scenario 1 Event 5.
4 CST Level Instr. failure; HPCS Suppression Pool Suction Valve fails to shut on auto suction shift					X			S	
5 2 nd Earthquake; RFPT B bearing oil line Break/ Trip of RFPT B								S	
6 RPV Head Out Seal fails; manual reactor scram								S	
7 3 rd Earthquake, CW exp. joint rupture; loss of CW/ Loss of Vacuum; Mn Turb Trip RFPT A Trips						X		E	NRC: Validate bounding criteria for CT. Verified CT bounding Criteria during onsite validation – SAT.
8 Inadvertent ADS Initiation						X		E	NRC: Validate bounding criteria for CT. Verified CT bounding Criteria during onsite validation – SAT.
8	0	0	0	0	2	2	7	S	

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Scenario: 3 (90% Rx Pwr)

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 Shift TBCC Pumps								S	
2 Raise Rx Power to 100%								S	
3 RPV Level transmitter C34- N004B fails upscale					X			S	
4 M17-F020 opens – req'd closing M17-F025; the vacuum breaker INOP					X			S	
5 Cond Bstr Pump B trips. Scram on lowering HST level. (Auto scram failed)								S	
6 ATWS with SDV leak – Enter EOP-01, then EOP- 01-05 and EOP-02						5X		E	NRC: Validate bounding criteria for CTs. Initiate SLC, Inhibit ADS, T&P, Initiate CS, & Secure CS. Verified CT bounding Criteria during onsite validation – SAT.
7 RHR C pump fails to auto start on T&P. Manually start RHR C pump							X	S	NRC: 2019 NRC ILE Scenario 3 Event 9.
8 Gang Rod Drive Mode fails Insert rods in Individual Drive Mode								S	
9 Containment Spray A fails. Initiate CS B								S	
9	0	0	0	0	2	5	8	S	

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Scenario: 4 (80% Rx Pwr)

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 Shutdown RHR B from SPC to standby								S	
2 Raise Rx Power to 100%								S	
3 Recirc FCV A fails open with no demand. Lockup FCV A.					X			S	
4 Service water pump D trips. Enter ONI-P41 & shift SW pumps								S	
5 AEGTS fan A has low flow. Start AEGTS Fan B.					X		X	S	NRC: 2019 NRC ILE Scenario 2 Event 3.
6 Steam Leak in RCIC Pump room								S	
7 RCIC isolation valves E51-F063 and F064 fail to auto isolate.								S	
8 RCIC failed to fully isolate. Manual Rx Scram prior to EOP-03 Max Safe Limit						X		E	NRC: Validate bounding criteria for CT. Verified CT bounding Criteria during onsite validation – SAT.
9 ATWS <4%						X	X	E	NRC: 2017 NRC ILE Scenario 2 Event 7. NRC: Validate bounding criteria for CT. Verified CT bounding Criteria during onsite validation – SAT.
10 Motor Feed Pump fails to start; use HPCS						X		E	NRC: Validate bounding criteria for CT. Verified CT bounding Criteria during onsite validation – SAT.
10	0	0	0	0	2	3	8	S	

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Scenario: 5 (77% Rx Pwr)

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 Lower Rx Power to 72%								S	
2 Shift stator water cooling pumps A-> B running								S	
3 RFBP A trips, manually start RFBP B								S	
4 CR rad mon gas channel fails high. Secure 2 nd CR ventilation train					X			S	
5 CRD Pump A trips on overcurrent. Shift CRD pumps					X	X	X	S	NRC: 2019 NRC ILE Scenario 2 Event 8. NRC: Validate bounding criteria for CT. Verified CT bounding Criteria during onsite validation – SAT.
6 Inadvertent RCIC initiation. Level 8 Trips occur and Rx Scram								S	
7 ECC A pump fails to auto start on RCIC start								S	
8 RCIC injection valve fails to open. Trip RCIC								S	
9 Motor Feed pump shaft breaks. Lower RPV press for LPCS to inject						X		E	NRC: Validate bounding criteria for CT. Verified CT bounding Criteria during onsite validation – SAT.
10 Generator Output Breaker S610 fails to trip							X	S	NRC: 2019 NRC ILE Scenario 2 Event 9.
11 (Conditional) ED if unable to maintain RPV level > -25" with LPCS						X		E	NRC: Validate bounding criteria for CT. Verified CT bounding Criteria during onsite validation – SAT.
11	0	0	0	0	2	3	9	E	Scenario is now SAT.

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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, pre-identified 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.

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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
2	8	0	2	0	2	0	0	S	Bounding criteria for CTs verified during onsite validation.
3	9	0	2	0	5	0	0	S	Bounding criteria for CTs verified during onsite validation.
4	10	0	2	0	3	0	0	S	Bounding criteria for CTs verified during onsite validation.
5	11	0	2	0	3	0	0	S	Bounding criteria for CTs verified during onsite validation.

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 pre-identified 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.

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OPERATING TEST TOTALS

	Total	Total Unsat.	Total Edits	Total Sat.	% Unsat.	Explanation
Admin. JPMs	9	1	5	3		Incorrect Critical Steps on 1 JPM.
Sim/In-Plant JPMs	11	1	5	5		Incorrect Critical Steps on 1 JPM.
Scenarios	4	0	0	4		Bounding criteria for CTs verified during onsite validation - SAT.
Op. Test Totals:	24	2	10	12	8.3	SAT (< 20%)

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).