

Facility:		Exam Date:												
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
<p style="background-color: yellow;">All of the JPMs identify "Critical Tasks." Critical tasks are associated with scenarios. JPMs should identify "Critical Steps." Corrected on all JPMs to Critical Step</p>														
A1		2.1.25	2										<p style="color: red;">Change the parameters in the stem such that if they use the incorrect pressure (i.e., 1020 instead of 1010) one answer is it is valid and one answer is it is not valid. Is the pressure in the initial conditions psia or psig? In A1 using psig, but in A5 are using psia. Grammatical error in initiating cue, "...based on that determination what are action ..."</p> <p style="color: blue;">Changed the initial parameters as requested, if the candidate uses improper rounding techniques or interpolates then the annunciator is valid. Fixed the initiating cue grammar.</p> <p>JPM now SAT</p>	
A2		2.1.7	2										<p style="color: red;">What is the purpose of providing Q39 in the initiating cue? PPM 3.1.2 does not include a Q38, so where is this step?</p> <p style="color: blue;">Removed Q39 from initiating cue.</p> <p>JPM now SAT</p>	
A3		2.3.4	2										S	
A4		2.2.13	3										S	<p style="color: red;">Change validation time to 20 minutes. Make full size prints of drawings.</p>
A5		2.1.25	2								X		<p style="color: red;">I still believe this to be RO level of knowledge. In addition to the fact that A1 is also asking for what actions are performed, they are steps in an ARP, which when provided, is RO level of knowledge. Additionally, the JPM states that the alarm is valid, but the listed actions are those if the ala2rm was not valid. My preference would be to make this the RO JPM and create a new one for A5.</p> <p style="color: blue;">Created new JPM</p> <p style="color: red;">Establish validation time of 20 minutes.</p> <p>JPM now SAT</p>	
A6		2.1.7	2										<p style="color: red;">Change validation time to 10 minutes. Step 2 establish error band of ±0.4. Change task standard to get rid of explanation of why RO calculations are not correct and add the correct values are 13.4 ±0.4. Answer key get rid of the OR statement and state the error band is ±0.4.</p> <p style="color: blue;">Validation time set at 10-Min</p> <p style="color: blue;">Corrected task standard and answer key.</p> <p>JPM now SAT</p>	

A7	2.2.18	2											ES	<p>Change validation tome to 10 minutes. Add to the initial conditions the Reactor Building Ventilation is in service (page 4 and 9). Validation time set at 10-Min. Added RB Hvac and Instrumentation to initial conditions. JPM now SAT</p>
A8	2.3.14	2											SM	<p>Any time math is performed, must have error bands. For step 9, everyone will likely evaluate tech specs, not merely annotate that they need to be evaluated. What is the purpose of WEA-RIS-14 and TEA-RIS-14? Error band added. Added the evaluation for TS 3.7.5, Evaluation of TS 3.4.8 for RCS activity rate would be based on chemistry results of step 4.1.6 which are not provided (Chemistry was just directed to perform analysis on previous step) WEA-RIS-14 and TEA-RIS-14 are there to show that conditions are not "elevated" such that entry into section 4.2 of ABN-OG is not required (Section 4.2 leads to scrambling the reactor) Add 335 – 336 µCi/s to the task standard Range added to task standard. JPM now SAT</p>
A9	2.4.49	2											SM	<p>Change the parameters in the stem such that if they use the incorrect pressure (i.e., 1020 instead of 1010) one answer is it is valid and one answer is it is not valid. Is the pressure in the initial conditions psia or psig? In A1 using psig, but in A5 are using psia. Grammatical error in initialing cue, "...based on that determination what are action ..." Changed the initial parameters as requested, if the candidate uses improper rounding techniques or interpolates then the annunciator is valid. Fixed the initiating cue grammar. Initiating cue, capitalize HOSTILE ACTION (pages 4 and 8). Put THIS IS A TIME CRITICAL JPM at the top of pages 8 and 9. For setup, 3.1.1A Made available IF requested. Changed HOSTILE ACTION. Added time critical in large bold at top of student handouts. JPM now SAT</p>
Simulator/In-Plant JPMs	1 Safety Function and K/A													
P1	295016 A1.07	2											ES	<p>Add a non-critical step 11 to add procedure step g. "VERIFY adequate discharge pressure on SW PI 32AR." The task standard needs to be modified to add something like "with adequate discharge pressure." Otherwise, after the pump starts the task standard has been satisfied.</p>

													<p>step 5 should be a critical step, and k and l in step 6 should be critical.</p> <p>Split out step 6 into multiple steps such that k and l are designated as critical steps. Modified task standard per above.</p> <p>Step 5 is not a critical step since the pressure rate default is 50.</p> <p>Step 5 changed to not a critical step.</p> <p>JPM now SAT</p>
S4	288000 A4.01	2											<p>Attributes on page 2 list this JPM as alternate path, but it is not. Not identified as one on ES-301-2 either.</p> <p>Examiner note associated with step 1, provide the candidate with an entire copy of SOP-HVAC/RB-OPS.</p> <p>Steps 3 and 4 should be critical steps.</p> <p>Changed page 2 attributes to reflect that it is not alternate path. Changed to provide candidate with entire SOP-HVAC/RB-OPS instead of just section 5.1</p> <p>Uncheck box on page 2 designating alternate path.</p> <p>Initiating cue should state that the four annunciators listed are flagged (and flag them in the simulator). Step 7 standard should note to proceed to step 8 instead of step 7. Step 11 should be critical and revise the task standard to include placing the controller in automatic.</p> <p>Check removed from alt path. Added flagged annunciators to setup and cues. Step 11 not critical and standard revised to include controller in auto.</p> <p>JPM now SAT</p>
S5	212000 A2.01	2											<p>This isn't truly alternate path the way the JPM is written, because you are starting in the alternate path (step 1 of a JPM can't be where the alternate path starts). Would prefer that the MG set trips after the JPM has started.</p> <p>The only part of step 1 that is critical is to close EDR-V-20. I don't think step 3 is critical. Since the step states if power is available, thus the RPS bus can be energized (task standard) without throttling the valve. If you want the step to be critical, it needs to be added to the task standard. Initiating cue should be to perform up to and including step 4.5. Add throttling RWCU-V-104 to the task standard. Step 1 is not critical. Add step 4.5 to then end of the JPM and make it critical, by failing the gland seal exhauster, that makes the JPM alternate path. Add non-critical step 8 corresponding to step 4.6 in the procedure.</p> <p>Per discussions during validation week: Left the start of the scenario with RPS-MG-A already overcurrent tripped. Left in the malfunction for EDR-V-20 to fail to automatically close, but it is no longer a critical step.</p> <p>Changed Initiating Cue to take actions up to and including step 4.6. Added RWCU-V-104 Throttled to the task standard (remains a critical step due to the repercussions of the valve not being throttled with the</p>

																							current plant conditions). Added a conditional trigger that overrides AR-EX-1A to off and RPS-A is transferred to the alternate source (It will not automatically restart). When the operator reaches step 4.5 the alternate gland exhauster (B) will be required due to A not running such that the candidate will manually start AR-EX-1B and take the control switch for AR-EX-1A to OFF (ALT Path). Added Step 4.6 to the cue such that there is a step after the alternate path step. Fixed the initiating cues listed on pages 4 and 10. JPM now SAT	
S6	217000 A2.01	2																					S	The PPM reference on the JPM setup page is incorrect. Corrected On JPM setup, note to not take to RUN until cued by examiner to minimize degrading level. Added a note to NOT take to run until cued.
S7	259001 A4.02	2																					S	Attributes on page 2 list this JPM as alternate path, but it is not. Not identified as one on ES-301-2 either. Corrected on master copy – Will double check all forms and JPM after all revisions made post validation to ensure correct number of alt path. K/A statement is incorrect. S7 and S8 K/A statements were somehow swapped, Corrected on both.
S8	201001 A4.01	2																					S	Attributes on page 2 list this JPM as alternate path, but it is not. Not identified as one on ES-301-2 either. Corrected on master copy – Will double check all forms and JPM after all revisions made post validation to ensure correct number of alt path. K/A statement is incorrect. S7 and S8 K/A statements were somehow swapped, Corrected on both.

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: CGS			Scenario: 1					Exam Date: 2/22/21		
1	2	3	4	5	6	7	8	9	10	
Event	Realism/Cred.	Required Actions	Verifiable actions	LOD	TS	CTs	Scen. Overlap	U/E/S	Explanation	
1								E S	Add same examiner note on page 9 to the bottom of page 11 Added same note to page 11 and added SOP-MT procedure to initially given to crew on set up page.	
2					X		X	E S	Delete examiner note on bottom of page 13. It is an incorrect statement. Examiner note removed; this was the expectation for a drifting rod. A stuck ROD is unable to meet its safety function and IS a TS call.	
3					X			S		
4								E S	Activate oil leak on RFW-P-1A on a 2 minute time delay from the earthquake trigger Event 4 (Page 4,24) RFP Oil leak is now off trigger 4 with a 2-minute TD.	
5						1		E S	Add that the critical task start time is when annunciator comes in for OPRM trip (2-4P603 A7) (Page 29) Examiner note added for the critical task start time.	
6								S		
7								S		
8								S		
9						1		U S	Not a critical task. Make event 8 a critical task to restore service water to or trip DG-3. Move header for Event 9 at bottom of page 38 to top of page 39. (Page 2,8,38) Removed original Critical task 2 and replaced it with a new one for DG as discussed. Removed original critical task from pages 39,41. Fixed wording and schedule file for event 7 (Page 5,35), Changed event so that the B-7 breaker fails (as discussed) and the bus is repowered by DG-1 with no service water cooling for critical task 2.	
					2	2	1			

Facility: CGS			Scenario: 2				Exam Date: 2/22/21		
1	2	3	4	5	6	7	8	9	10
Event	Realism/Cred.	Required Actions	Verifiable actions	LOD	TS	CTs	Scen. Overlap	U/E/S	Explanation
									On D-1, remove Instrument Malfunction for BOP. There is no verifiable action. On scenario summary page 5 event 7, there is no description of Critical task 2. No viable actions for event 2, changed to TS only Organized event 7 and added critical task 2 such that it was clear.
1								S	
2					X			E S	For tech spec action statement, add "Function 1.b" Table 3.3.5.1-1 Function 1B added to TS call
3					X			E S	Note at bottom of page 12, peer is incorrectly spelled. Step 2.1.1 page 13, remove the word RAISE. Add examiner note that removal of one fuse will cause the SRV to close. Spelling correction made on page 12. Step 2.1.1 on page 13 is a "snip it" directly from the procedure as written. The redline through raise is there to signify that the candidate should circle and select lower on the quick card. Examiner note added for removal of the first fuse.
4							X	S	
5								E S	Booth cue should be that the fire is still ongoing. Add a booth cue that the fire brigade leader will call and announce the fire is out once the second fire pump is started. (Page 23) Changed fire brigade leader call back such that the fire is still in progress (Changed such that further actions to start a second fire pump is taken) (Page 24) Added fire brigade leader call back for the fire is out AFTER the crew has taken action to start a second fire pump per ABN-FIRE
6						1	X	S	
7						1		S	(Hand Note captured on page 29) Added examiner note (Page 32) that the crew could end up in level power conditions if SRVs are used excessively. Added contingency steps on page 33 and 34 If the crew inadvertently reaches level power conditions.
					2	2	2		

Facility: CGS		Scenario: 3					Exam Date: 2/22/21			
1	2	3	4	5	6	7	8	9	10	
Event	Realism/Cred.	Required Actions	Verifiable actions	LOD	TS	CTs	Scen. Overlap	U/E/S	Explanation	
1					X			U S	Add Function 17 to tech spec call. Add LCS 1.3.3.1 A and D to tech spec call Added LCS Function 17 to the TS call, Added LCS 1.3.3.1A and D to the TS call. re-formatted the affected blocks so it all looks the same. (Page 10) Verified that the power supply for WMA-AD51A1 is E-DISC-PP-7AE/12 listed in the annunciator response is correct and the label plate is incorrect (E-DISC-PP-7AF/12) This condition currently exists in both the simulator and the plant. An SR was previously written to capture this. Actions are being taken to correct this both in the plant and the simulator. This discovered and documented by operations department on Aug 20 th , 2020 during annual Requal cycle.	
2								S	(Page 14,15) Added entry into ABN-ELEC-SH6 and applicable steps.	
3					X			E S	Add booth cue that if asked to investigate loss of RRC pump, "Overload trip of ASD-CH-1A1" Add first four rods in shutdown sequence to the D-2 Add to the examiner note that may have to follow up on tech specs (Page 18) Added booth operator response for investigations as OPS 4 for loss of RRC-P-1A at ASD. (Page 21) Added the first 4 rods in the sequence for the rod line reduction. Added to the examiner note for the TS call to be a follow up question if the lead examiner chooses to move ahead with the scenario.	
4						1		E S	Move header for Event 4 at bottom of page 23 to top of page 24. (Page 23, 24) – Event 4 moved.	
5								E S	Move header for Event 5 at bottom of page 32 to top of page 33. (Page 33) Event 5 moved.	
6								S		
7						1		S		
					2	2				

Facility: CGS			Scenario: 4					Exam Date: 2/22/21	
1	2	3	4	5	6	7	8	9	10
Event	Realism/Cred.	Required Actions	Verifiable actions	LOD	TS	CTs	Scen. Overlap	U/E/S	Explanation
									On the D-1 and scenario discussion, describe the tech spec call for SL-81 (it is currently in the D-2) Added SL-81 SRO TS call to scenario discussion / event matrix
1								E S	Add circ water basin level high to turnover sheet and flag the annunciator Added CW basin annunciator as flagged on set up and expected in initial conditions. I did not burn down basin level as the handwritten note on page 9 suggested.
2					X			E S	Add booth cue if asked to investigate HCU-26-51, "nothing abnormal at HCU-26-51." If asked for concurrence from engineering or shift manager, add booth cue to concur. Page 12 – Added booth operator response if field operator is sent to locally investigate the HCU. Added booth operator response if contacted as the SNE. Original booth operator response on page 12 was moved to page 13 right before the affected step.
3					X			E S	Remove examiner note on page 17 Removed examiner note. Page 19 – Added LCS 1.6.1.5 to the TS call if B RHR Pump control power fuses were removed.
4								S	
5						X	X	E S	Step 4, Direct is misspelled Page 25 – Spelling error fixed
6								S	
7						X	X	E S	Add note page 33 ... added to examiner note for possible manual ABN-PRESSURE closure of MSIVs if reactor pressure approaches 500#.
					2	2	2		

Instructions for Completing This Table:

- 1 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: Columbia Generating Station		Exam Date: February 22 – 26, 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	0	2	0	2	1	8	E		
2	7	0	2	0	2	0	0	E		
3	7	0	2	1	2	0	11	E		
4	7	0	2	0	2	0	0	E		

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 9, 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.

Site name:		Exam Date:				
OPERATING TEST TOTALS						
	Total	Total Unsatisf.	Total Edits	Total Satisf.	% Unsatisf.	Explanation
Admin. JPMs	9	1	6	2		
Sim./In-Plant JPMs	11	0	7	4		
Scenarios	4	0	4	0		
Op. Test Totals:	24	1	17	6	4	

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 Unsatisf.)/(Op. Test Total) and place this value in the bolded "% Unsatisf." cell.

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