

Facility: Callaway		Exam Date: 2/14/2022												
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
	A1	2.1.25	2										E S	Need to ensure table handout numbers are legible. <b>Table is legible when printed on 11x17 paper.</b>
	A2	2.2.41	3										S	Why are ECV027 or ECV156 along with ECV026 required to be tagged open? ODP-ZZ-00310 states at least one vent and/or drain be tagged open. It seems to me any one of ECV016, ECV026, ECV027, ECV139, ECV156 or ECV158 can be tagged open and satisfy the procedure. <b>The initiating cue directs "Provide 1 pump casing drain and 1 1" piping drain. No Vent Paths are required." ECV139 is a 3/4" pipe. ECV158 is a 3/4" vent on the discharge side of the pump. The cue says no vent paths are required, therefore ECV158 would not satisfy the initial cue. ECV016 is a 3/4" pipe. Hence, to meet the initial cue requirements of a 1" drains ECV027 or ECV156 along with ECV026 are required. No change made.</b>
	A3	2.3.12	2										E S	Is it possible someone would not recommend shielding if they included removal of the shielding? Leave out procedure handout, HTP-ZZ-01101. <b>Interesting comment and I never considered that. Added a note in the cue that states "(Note: Do NOT consider the removal of the shielding, if installed, in your recommendation.)" Procedure removed.</b>
	A4	2.4.6	2										S	
	A5	2.1.25	2										E S	Initiating cue give to the applicant is misnumbered. It has 3 and 4 instead of 1 and 2. Initiating cue first number has the word only twice. <b>Fixed the numbering issue on the cue sheet and reworded the question to "1. What valves should be</b>



													flowpath is not available," last bullet of JPM step 5, JPM step 6, and JPM step 8 are critical. Remove cue of step #8, revise cue on step #9. <b>The last action of JPM Step #5, Step #6, and Step #8 were made critical steps. Removed cue of step #8, revised cue on step #9</b>
S3	006 A1.13	2											ES Why is acceptable to have a level of 35% when the cue directs raising level to 40%? Understand being slightly over, but don't understand why not meeting the direction would result in a passing grade. Task standard should include not falling outside the pressure band of 602 to 648 psig. <b>The statement of "while maintaining 'A' SI Accumulator pressure between 602 to 648 psig" was added to the task standard. The initial cue was revised to "raise to 35%" with the task standard providing an acceptable range of 35% to 40%. Added setup information instruction to display system using turnon code EP00. Added "SI test header is not in service to the initial student cue sheet. Fixed typo on step #19 note</b>
S4	039 A4.01	3											ES Since step 3.g RNO is an OR, is it possible than anyone will go directly to Addendum 35? Revise evaluator cue on step #21 and add EOP Addendum 35 Step 3 actions. <b>Based on the procedure step, yes it is possible. Common practice would be to try the Fast Close PB prior to entering the EOP Addendum but it is possible. Added a note to JPM Step #10 saying " Note: As Step #3.g RNO is an "OR" step, it is possible that the applicant enters EOP Addendum 35 without attempting fast closure using AB HS-79/80." Revise devaluator cue on step #21 and added EOP Addendum 35 Step 3 actions.</b>
S5	026 A1.03	3											ES Task standard states to close one suction valve before RWST level reaches 75%, but task element for step 27 states 90%. Task standard should also include the condition of annunciator 60D alarming.





**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: Callaway		Scenario: 1					Exam Date: 2/14/2022			
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	
More substantive comments likely during validation.										
1									Is the normal necessary since we'll see the operators use the purge system in JPM S8 and isolate mini-purge? Not knowing what the backup scenario will be etc, I included a normal with this scenario. The difference between S8 and the normal are the initial conditions and different actions taken to complete the task. In S8, containment pressure is negative, and a vacuum drag path via inlet dampers only is established with no fan operation. In this normal evolution, containment pressure is positive initially and an inlet and outlet path is established including along with supply and exhaust fan operation. While some dampers are common between both the normal and JPM, there are different initial conditions and switch manipulations associate with accomplishing the evolution. No change made.	
2										
3					✓					
4					✓		✓			
5							✓			
6								U S	There are no verifiable actions associated with event 6, therefore it can't count as a component failure. It should count as the major. Changed event #6 to the major for all 3 applicants and changed event #7 to a (C)omponent Failure. Left the Actual Attributes for Malfunctions after EOP entry at 1 ('A' EDG field flashing not working). The next effect would be the BOP applicant receiving 1 additional I/C item for the total required per ES 301-5, Transient and Event Checklist. As the backup scenario has not been selected, ES 301-5 should be revised to reflect this affect the backup scenario is selected.	
7						✓✓	✓	E S	This would be the malfunction after EOP entry, thus a (C)omponent failure. See Comment above	
									Comments addressed from validation week: <ul style="list-style-type: none"> <li>• RCPs to charging in safety significance of CT2</li> <li>• Added notes about PPC point for BG LT0149, REL0112A</li> <li>• Updated simulator setup instructions for rad monitor covers                             <ul style="list-style-type: none"> <li>○ Added evaluator note about covers</li> <li>○ Added to turnover information "Another operator will perform all administrative functions associated with the Gaseous Radwaste Release Permit."</li> </ul> </li> </ul>	

									<ul style="list-style-type: none"><li>• Added a ATC aspect to the loss on NB02 event, Changed step #4 and #5 and #20to ATC from BOP</li><li>• Revised evaluator note on page 15</li><li>• Added "have copy of OTN-EC-00001 available</li><li>• Added Step #1 of EOP Addendum 7 as Attachment 2 and provided an evaluator note</li><li>• Added CT-2 statement and bolded items on page 41 to support</li><li>• Updated page total to #54</li></ul>
7	0	0	0	0	2	2	3		



Facility: Callaway		Scenario: 2					Exam Date: 2/14/22			
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	
More substantive comments likely during validation.										
1									Comments addressed from validation week: <ul style="list-style-type: none"> <li>• Reworded event description for #5 and #7</li> <li>• Changed to component failure from reactivity on event #2 for SRO and ATC</li> <li>• Added note about valve stroke times on page 10</li> <li>• Added setup instructions for SFP Cleanup</li> <li>• Added " to ≤5% RTP" to CT#1 for inserting control rods</li> <li>• Added Evaluator note to proceed to next event on the normal evolution but left steps for actions of OTN-EC-00001 in case</li> <li>• Updated CT#1 wording on page 33</li> <li>• Fixed formatting on E-3 Step #16</li> <li>• Corrected E-3 Step #6</li> <li>• For Event #2, included steps for turbine load adjustment in OTO-MA-00008 step #3 and Step #8 of OTO-SF-00001</li> </ul>	
2					✓					
3										
4					✓					
5							✓			
6						✓	✓			
7						✓✓✓				
7	0	0	0	0	2	4	2			

Facility: Callaway		Scenario: 3					Exam Date: 2/14/22			
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	
More substantive comments likely during validation.										
									Comments addressed from validation week: <ul style="list-style-type: none"> <li>• Event #2 change from ATC credit to BOP credit</li> <li>• Correct typo of NFASP to NSAFP</li> <li>• Added steps 6.2.5.c 1-3 to page 8</li> </ul>	
1										
2					✓					
3										
4					✓					
5										
6						✓				
7						✓	✓			
7	0	0	0	0	2	2	1			

Facility: Callaway		Scenario: 4					Exam Date: 2/14/22			
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	
More substantive comments likely during validation.										
1										
2					✓					
3										
4										
5					✓					
6							✓			
7						✓ ✓ ✓	✓		<p>I am confused by CT-2. It states to start A SIP and both A and B CCPs, but the performance feedback makes it appear that the B CCP will not be started. <b>Yes it was confusing and wrong as the last change made was not fully incorporated into the guide. The intent was to have a small to mid Size LOCA in which one SI pump (B SI pump) is not enough to maintain RCS inventory. With the malfunctions given, only the B SI pump would autostart but it wont inject until ~1600 psig, therefore applicant actions are required. Procedurally, the applicant should start both CCPs and the A SI pump. An additional CT statement was removed from page 38 and the performance feedback was updated. (This may have been a leftover from my original idea of taking an EECS train away due to loss of CCW or ESW (but ineffective as the pumps may be used for a short time before they overheated).) The below note was added for the situation of where the crew is fast on starting the CCPs and the RCS Inventory loss is arrested by the CCPs and running B SI pump: "Note: Based on the timing of manual actions, it may not be necessary to start the 'A' SI pump to arrest the RCS inventory loss especially if the CCPs and B SI pump are maintaining RCS pressure (RCS LOCA = RCS Injection rate), therefore the crew may elect not to start it as the RNO action states "Start ECCS pumps as necessary". If this happens, the intent of the CT is met, and the CT should be considered SAT. "</b></p>	



**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  $\geq 2$  for each scenario. (ES-301, D.5.d)
- In column 7, preidentified CTs should be  $\geq 2$  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:		Exam Date:								
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	7	1	2	0	2	0	(%)	$\frac{E}{S}$		
2	7	0	2	0	4	0	0%	$\frac{E}{S}$		
3	7	0	2	0	2	0	0%	$\frac{E}{S}$		
4	7	0	2	0	3	0	0%	$\frac{E}{S}$		

**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.

<b>Site name:</b>			<b>Exam Date:</b>			
<b>OPERATING TEST TOTALS</b>						
	Total	Total Unsat.	Total Edits	Total Sat.	% Unsat.	Explanation
Admin. JPMs	9	0	4	5		
Sim./In-Plant JPMs	11	0	7	4		
Scenarios	4	0	4	0		More detailed comments following validation.
<b>Op. Test Totals:</b>	24	0	15	9	0.0%	

**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 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).