ES-301 **Operating Test Review Worksheet** **Form ES-301-7**

Facility: Ginna (Retake Exam)											**Exam Date: July 23, 2019**	
Admin JPMs	1 ADMIN Topic and K/A	2 LOD (1-5)	3 Attributes I/C Focus	Cues	Critical Steps	Scope (N/B)	Overlap	Perf. Std.	Key	4 Job Content Minutia	Job Link	5 U/E/S	6 Explanation
SRO ADMIN A1 - Perform a Critical Rod Position Calculation in accordance with O-1.2.2	Conduct of Operations 2.1.25											E	Cue prior to Initial Conditions vague COLR Figure was needed by Validator to complete JPM Tolerances throughout JPM are not realistic when interpolating curves JPM Step 25 Standard incomplete Procedure needs a definite end point to give to Applicants On JPM CUE SHEET, add place for Applicant to enter Estimated Critical Position Changed cue prior to Initial Conditions to "Provide Applicant with Initial Conditions/ Cue Sheet and Data Sheet (Last 2 pages of this JPM) and Handouts 1 and 3. Added COLR Figure COLR-3 as Handout 3 Revised JPM Steps 12, 13, 14, 19, 21, 23, and 25 Added "Bank D" to JPM Step 25 Standard Changed 2nd Initiating Cue to add "through Section 6.8" On JPM CUE SHEET, added place for Applicant to enter Critical Rod Position
SRO ADMIN A2 - Determine Operating Limits for Station 13A Transmission in accordance with O-6.9	Conduct of Operations 2.1.32											E	Current Time in Initial Conditions not consistent between pages 2 and 9 3rd Initiating Cue is confusing for Applicant Assignment of critical steps incorrect Applicant should state Tech Spec LCO entered on CUE SHEET Change Current Time in Initial Conditions on page 9 to 1330 Deleted 3rd Initiating Cue Changed 2nd part of JPM Step 7 to NOT critical; and changed JPM Steps 11 and 12 to critical Added place for Applicant to enter applicable Tech Spec LCO on CUE SHEET
SRO ADMIN A3 - Determine limitations in accordance with A-52.12, Nonfunctional Equipment Important to Safety	Equipment Control 2.2.40											E	EIN in A-601.16 is incorrect leading Applicant to make mistake Operator needs to know duration of maintenance activity to determine contingency actions Applicant needs CC-GI-118 as reference to determine contingency actions JPM Step 11 Standard is incorrect

													Changed EIN to other fuel trailer (TBD01A) throughout JPM Added "Expected duration 24 hours" to Initial Conditions Added CC-GI-118 as a Handout Revised Standard for JPM Steps 11 and 12 since TBD01A is fire risk important
SRO ADMIN A4 - Review and Approve Gas Decay Tank Release Permit	Radiation Control 2.3.6											E	JPM can NOT be administered to SRO Applicants at same time Add a Critical Step to NOT sign and approve release permit Current date and time missing from Initial Conditions Task Standard lacks details Added Statement to JPM cover page to administer JPM to Applicants one at a time Added Critical Step 6 to JPM to NOT sign and approve release permit Added Current date and time to Initial Conditions Added specificity to Task Standard
SRO ADMIN A5 - Determine Protective Action Recommendations in accordance with EP-CE-111	Emergency Plan 2.4.41											E	Applicant may question whether EAL declaration is correct, Added "and the EAL declaration has been verified by the STA" to end of last Initial Conditions bullet Added EAL Wallboard as Handout if requested
RO ADMIN A1 - Perform a Daily Surveillance Log	Conduct of Operations 2.1.18											E	2nd Initiating Cue is vague (no clear end point) Malfunctions are too close to discern deficiency 2nd CUE following JPM Step 4 needs to be revised Changed 1st Initiating Cue to add "pages 1 – 3" Adjusted malfunctions Revised 2nd CUE following JPM Step 4 to "88%"
RO ADMIN A2 - Calculate SDM for an Operating Reactor with a Misaligned Control Rod	Conduct of Operations 2.1.37											E	JPM Step 12 needs a tolerance band in the Standard Need place for Applicant to state Actual and Required SDM on CUE SHEET Added tolerance band of ±1 pcm for JPM Step 12 Standard Added place for Applicant to state Actual and Required SDM on CUE SHEET
RO ADMIN A3 - HCO Review of STP-O-36QC	Equipment Control 2.2.42											E	1st Initiating Cue vague JPM Step 2 Standard needs to be changed to include capturing the transposition error between procedure and Attachment

													Revised 1st Initiating Cue to "The US has directed you to perform the HCO/CO review of the procedure and all attachments in STP-O-36QC" Revised Standard for JPM Step 1 to annotate the transposition error Revised Standard for JPM Step 2 for Action Statement 3 applies
RO ADMIN A4 - Determine Maximum Reactor Vessel Venting Time	Radiation Control 2.3.11											E	Applicant needs to know whether a RCS cooldown is in progress Added an Initial Condition bullet "A controlled cooldown is NOT in progress"
Simulator/In-Plant JPMs	1 Safety Function and K/A												
SIM JPM A - Establish RCS Injection in AP-RCS.4 with CI Valve Failures	2: Reactor Coolant System Inventory Control 006 Emergency Core Cooling System (ECCS) [006 A4.01 (4.1/3.9)]											S	
SIM JPM B - Transfer 4160V Auxiliary Loads and Take Actions for Loss of Bus	6: Electrical 062 AC Electrical Distribution System [062 A4.01 (3.3/3.1)]											S	
SIM JPM C - Defeat Failed RCS Temperature Channel	7: Instrumentation 012 Reactor Protection System (RPS) [012 A4.04 (3.3*/3.3)]											S	
SIM JPM D - Placing LTOP in Service	3: Reactor Pressure Control											E	Multiple instances of "on Service" vice "in service" throughout JPM Changed "on service" to "in service" throughout JPM

	010 Pressurizer Pressure Control System (PZR PCS) [010 A4.03 (4.0/3.8)]												
SIM JPM E - Vent RCS for Accumulator/RHR Injection	4 primary: Heat Removal From Reactor Core EPE W/E06 Degraded Core Cooling (EPE W/E06 EA2.2 (3.5/4.1)]											E	JPM Steps 3 and 4 NOT critical since SI and CI already reset at start of JPM Removed Critical Step annotation from JPM Steps 3 and 4
SIM JPM F - Perform Intercept and Reheat Stop Valve Test with Low EH System Pressure	4 secondary: Heat Removal From Reactor Core 045 Main Turbine Generator (MT/G) System [045 A4.01 (3.1/2.9)]											S	
SIM JPM G - Secure Containment Spray in E-1	5: Containment Integrity 026 Containment Spray System (CSS) [026 A2.08 (3.2/3.7)]											S	
SIM JPM H - Respond to Complete Loss of CCW Flow	8: Plant Service Systems APE 026 Loss of Component Cooling Water (CCW) [APE 026 AA1.02 (3.2/3.3)]											S	
IN-PLANT JPM I - Locally Close MSIVs	4 secondary: Heat Removal From Reactor Core											E	JPM contains unnecessary/extra Steps Removed JPM Steps 1 – 4 Added "beginning at Step 2.1" to end of Initiating Cue

	039 Main and Reheat Steam System (MRSS) [039 A3.02(3.1/3.5*)]												
IN-PLANT JPM J - Alternate SFP Cooling Systems (A to B)	8: Plant Service Systems 033 Spent Fuel Pool Cooling System (SFPCS) [033 G2.1.29 (4.1/4.0)]											E	Changed JPM Step 4 and CUE to have Operator closing V-8685 to raise flow
IN-PLANT JPM K - Locally Isolate CI/CVI Valves	5: Containment Integrity EPE 009 Small Break LOCA [EPE 009 EA1.08 (4.0/4.1)]											S	

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: Ginna		Scenario: 1			Exam Date: July 23, 2019				
1 Event	2 Realism/Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scen. Overlap	9 U/E/S	10 Explanation
1								S	
2					X	X		S	
3					X			S	
4								S	
5							X	S	2018 scenario 1, event 5 exam overlap
6							X	S	2018 scenario 1, event 7 exam overlap
7						X		E	Provide a specific flow rate range for AFW that is necessary to meet this critical task. Solution: Licensee added "50 gpm to each" in critical task.
									Other Changes: 1. Scripted in LCO 3.4.1 if RCS pressure lowers to < 2175 psig 2. Scripted additional notes 3. Deleted AP-ELEC.1 steps after Step 40.d RNO 4. Deleted scripted actions for manual reactor and turbine trips

Facility: Ginna		Scenario: 2			Exam Date: July 23, 2019				
1 Event	2 Realism/Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scen. Overlap	9 U/E/S	10 Explanation
1								S	
2								S	
3								S	
4					X			S	
5					X			U	Missing TS 3.4.17, SG Integrity Solution – Licensee added TS 3.4.17
6						XX		S	Two critical tasks associated with SGTR
7								S	
8								S	
									*NOTE: This scenario has no entry into a contingency EOP with substantive actions

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: Ginna							Exam Date: July 23, 2019		
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	0	2	0	2	0	0	S	
2	8	0	2	1	2	0	8.3	S	See table above for resolution to unsat TS

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:	Ginna				Exam Date:	July 23, 2019
OPERATING TEST TOTALS						
	Total	Total Unsat.	Total Edits	Total Sat.	% Unsat.	Explanation
Admin. JPMs	9	0	0	9	0	
Sim./In-Plant JPMs	11	0	0	11	0	
Scenarios	3	0	3	3	0	Deleted details about review of Scenario 3 as it was not run during the actual exam.
Op. Test Totals:	23	0	3	23	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).