Facility: Diablo Canyon   **Exam Date:**   February 24 - 28, 2020

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	2.1.5	2									✓	U̶ S	This is SRO level of knowledge. Replaced JPM. Change bounding on key to +0.05 – 0. This results in the acceptable answer being 56.51 kW +2.2 – 0. Updated the key. Correct PI-934 reading on the key to correct value of 7.0. Corrected key. Add attachment #1 of OP H-9 to the key. Added attachment. JPM now SAT.
A2	2.1.25	2										E̶ S	With heat load error at ± 0.5, make heatup rate error ± 0.225, and time to 200° error ± 0.8. Correct errors. Also, make sure the applicant is provided with all pages of OP AP SD-5. Ensured. Change validation time to 10 minutes. Changed. JPM now SAT.
A3	2.2.37	2										S	Ensure that C-2 is stapled to the cue sheet, not the procedure. Change validation time to 15 minutes. Changed.
A4	2.3.5	2										S	
A5	2.1.5	2										E̶ S	In the initial conditions, have one of the units in an outage, but the assessment still being done for the at-power unit. Since the rules are different, this adds a little bit of a complexity to the JPM. Does not change the answer.I fail to see a significant difference between A1 and A5. Changed to one unit being in an outage and this is approving others, that is an SRO task. A1 is validation whether you yourself can assume the watch. Change validation time to 20 minutes. Changed. JPM now SAT.
A6	2.1.25	2										E̶ S	Make fire zone drawing 11x17. Will ensure. Add the word "door" next to inoperable assembly in the task standard. Added door to task standard. JPM now complete.
A7	2.2.37	2										E̶ S	Initiating cue should state, "Determine the LCO ACTION(s), **if any,** Unit 1 should enter". Changed to "determine all applicable LCO ACTION(s) to Unit 1, should any exist." Add to the initial conditions 0 capacitors in service and none available. Added. Add Attachment 5 of OP J-2:VIII. Added. Modify task standard to include reasons for inoperability. Modified. JPM now SAT.
A8	2.3.4	2										E̶ S	Request that the expected dose for Wayne be greater than 5.0 REM and the answer is not to approve the permit. I think the Banner non-approval is too simple, and this will beef up the LOD a little. Changed as requested. Clean up funny text/format characters in

					procedure. Cleaned up procedure. Change validation time to 15 minutes. Changed. JPM now SAT
A9	2.4.40	2		~~E~~ S	Why isn't this JPM time critical? There should be a time involved in an emergency declaration. Made a 15 minute time critical JPM. Replace explain rationale in the cue with identify all errors should any exist. Modified cue. JPM now SAT.
Simulator/In-Plant JPMs	1 Safety Function and K/A				

General Comment: Do not have cues that state, for example, a switch is in the off position or a meter reads a certain value. The cue should be to use a pointer of some kind to indicate the position. Normally the only verbal cues of this type are red light on, green light off, etc. Corrected.

S1	001 A2.03	2		~~E~~ S	Would like the second rod to drop after entering procedure OP AP-12C. Second control rod will drop upon entry into OP AP-12C or after a 30-econd delay. JPM now SAT.
S2	013 A2.01	2		~~E~~ S	Add to the cue that "you are responsible for all actions including foldout page items." Modified the cue. JPM now SAT.
S3	E04 EA1.1	2		S	
S4P	011 EA1.01	3		~~E~~ S	Remove statement in the cue about having time to review the procedure. We will allow reviewing the procedure prior to entering the simulator, but once the applicant enters the simulator and is told he understands the task, the clock must start. (Either that, or don't have level drop below 33% until after the JPM starts.) JPM will start before reaching 33%. Note before step 1, add the time PK03-01, RWST VLV CLSD/LVL HILOW, comes into alarm (TCOA start time). Added note. Step 2.4 add breaker number for RHR PP 1-2. Added breaker number. JPM now SAT.
S4S	059 A2.07	2		S	Note that the JPM can be terminated after DRPI has indicated a change in rod position. Made note.
S5	E14 EA1.1	2		~~E~~ S	Extend JPM through securing CCP 1-3. Extended JPM. JPM now SAT.
S6	062 A4.07	3		S	
S8	067 AA2.17	2		~~E~~ S	Step 3.1, add a note that if the applicant ops to perform PK steps, cue another operator will perform PK steps. Step 4.1 add a note that the applicant may chose to close LCV-459 and LCV-460. Added both notes. JPM now SAT.
P1	010 A2.01	2		~~E~~ S	General comment steps 2, 4, 6, 8, 9, 10, and 11. Corrected. Instead of the cue in step 1 that another operator has been assigned to monitor the loading … put that information in the initiating cue. Added to cue. Step

																4 use exact nomenclature from procedure. Corrected. Step 4.2 add (left switch in bank of three). Added. Step 10 add (knife switch is up). Added. Step 11 add (up) to the position. Added. JPM now SAT.
P2	062 A2.11	2													E̶ S	General comment steps 3, 4, 5, and 7. Corrected. Step 4 indicate breaker is in the BACKUP (EPTSC) position. Corrected. Step add examiner cue if asked, "what do you recommend?" Added. JPM now SAT.
P3	2.1.30	2													S	On all valve position that state 0°, add or "C". Added.

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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Facility:	**Diablo Canyon**				**Scenario:**	**1**			**Exam Date:**	**February 24 - 28, 2020**
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	
								~~E~~ S	Critical task table, CT-1, should be prior to ANY steam generator overfill. Corrected	
1							✓	~~E~~ S	Proceed to the next event once 4-5 rod pulls complete. Corrected	
2								S		
3					✓			~~E~~ S	Insert note that there is an 18 second time delay. Inserted Clarify that the MAY switch CFCU to high speed. Noted	
4					✓	✓		~~E~~ S	CT-1 should be prior to ANY steam generator overfill. Corrected	
5						✓		S		
6						✓		~~E~~ S	Insert substeps for 6.c. Inserted For aligning charging, should be stops ALL BUT one … Corrected Table for manually starting pumps and CFCUs, not that ASW 1-2 taken to manual first, and CFCUs 1-3 and 1-5 if not running. Corrected Appendix HH step 1.b, ensures the valves are CLOSED. Corrected	
7						✓		S		
					2	3	2	~~E~~ S		

Facility:	**Diablo Canyon**				Scenario:	**2**			Exam Date:	**February 24 - 28, 2020**
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	
								~~E~~ S	Critical task table, CT-3, should be prior to stopping ANY SI pump. Corrected Summary page item 1, crew may follow up with OP AP-13 OR OP AP-5. Added OP AP-5	
1								S		
2					✓			S		
3								~~E~~ S	Note that PK04-21 will already be in alarm, but the crew may enter the alarm response procedure anyway. Noted	
4					✓			~~E~~ S	Bold the tech specs for consistency. Bolded Add examiner note that tube rupture is triggered 30 seconds after start of boration. Added note	
5						✓ ✓	✓	~~E~~ S	Clarify that RCPs 1-2 and 1-4 are not running. Clarified Step 15 of OP E-3, provide instrument air to containment valve number. Added FCV-584 Page 18, clarify the scenario is terminated on CT-3 is complete AND PORV CLOSED. Added	
6								S		
7								S		
8						✓		S		
					2	3	1	~~E~~ S		

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Facility:	**Diablo Canyon**					**Scenario:**	**3**			**Exam Date:** **February 24 - 28, 2020**
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
								~~E~~ S		Critical task table, CT-1, change from "close the block MOV" to "close the MOV block valve." Corrected
1					✓			~~E~~ S		Note that reviews tech specs and ECGs. Noted
2					✓			S		
3								~~E~~ S		Note that the next event is triggered after the start of boration. Noted
4							✓	S		
5								S		
6						✓		S		
7						✓		~~E~~ S		Change 9.a.1 so that depressurization can be accomplished with any available PORV. Changed 9.b.4 clarify that you will open FCV-55 and FCV-230. Clarified
						2	2	1	~~E~~ S		

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Facility:	Diablo Canyon					Scenario: 4				Exam Date: February 24 - 28, 2020
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
								~~E~~ S		On D-1 event 4, change to Component failure for SRO and BOP (no verifiable actions for the ATC). Changed Critical task table, CT-2, change from at least one high head injection pump to at least one SI pump. Changed
1					✓			~~E~~ S		Bold the tech specs for consistency. Bolded
2								S		
3					✓			S		
4			✓					~~U~~ S		No verifiable action for the ATC. Step 3.a, note standby select switch taken to manual first. Noted
5							✓	S		
6						✓ ✓	✓	S		ECA-0.0 step 4, MAY start TDAFW pump. Added may Step 5.a, detail the switch manipulations to attempting to start the diesel. Added steps. Step 5.a RNO, MAY dispatch field operators. Added may Step 9 second bullet should be PLACES and third bullet should be ENSURES. Corrected ECA-0.2 step 3.b, include a table with all the valves that must be realigned. Added Appendix DD, detail actions in steps 8 and 13. Detailed
7						✓		S		
			1		2	3	2	~~E~~ S		

Facility:	**Diablo Canyon**					Scenario: 5				Exam Date: February 24 - 28, 2020
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		On D-1 event 3, change to Instrument failure for all (ATC has verifiable actions). Changed
2					✓			S		
3					✓			S		
4								~~E~~ S		Step 2.1.3, report that there are no local alarms for HIGH IL TEMP AND LOW OIL FLOW. Changed
5						✓	✓	S		Provide line items for start and stop time for CT-1. Added E-0 step 1 RNO, add a bullet stating reclose 480 v breakers (per the actual step). Added bullet Step 5, pair the valves together that are on the same switch, specifically, FCV-253, 255, 258, and 500 together, and FCV-254, 256, 260, and 501 together. Corrected
6						✓		S		
7						✓		S		
8								S		Appendix E, pair the valves together that are on the same switch, specifically, FCV-253, 255, 258, and 500 together, and FCV-254, 256, 260, and 501 together. Corrected
					2	3	2	~~E~~ S		

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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: **Diablo Canyon**   **Exam Date:**   **February 24 - 28, 2020**

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	3	0	0	E	
2	8	0	2	0	3	0	0	E	
3	7	0	2	0	2	0	0	E	
4	7	1	2	0	3	0	14	E	
5	8	0	2	0	3	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.   <u>Events</u>. 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.   <u>TS</u>. 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.   <u>CT</u>. 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: $\left(\dfrac{2+4+6}{1+3+5}\right)100\%$

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:	**Diablo Canyon**			Exam Date:	**February 24 - 28, 2020**	

OPERATING TEST TOTALS

	Total	Total Unsat.	Total Edits	Total Sat.	% Unsat.	Explanation
Admin. JPMs	9	1	6	2		
Sim./In-Plant JPMs	11	0	7	4		
Scenarios	5	0	5	0		
Op. Test Totals:	25	1	18	6	4.0	

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).