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

Facility: Dresden			**Exam Date: June 15-19, 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		
RA1:	**N/A**												**N/A**
RA2:	**N/A**												**N/A**
RA3:	**N/A**												**N/A**
RA4:	**N/A**												**N/A**

A-N-1-S	[***Non-Emergency***] Reportability Determination (***2.1.2***/2.4.30)	3										E	NRC: 1. More positively link the JPM to the "Conduct of Operations" topic. a. Change the title to include "Non-Emergency" b. Add K/A 2.1.2 to JPM summary (K/A Number and Importance). 2. Add one or more steps that describe the actions to be performed by the applicant that lead to the conclusion that the event is reportable per SAF 1.8. Examples: a. Determine if the event is a malfunction/failure of a safety function **and/or** b. Utilize Reportability Tables and/or Decision Trees [LS-AA-1020] to determine potential reportable event requirements [e.g. SAF 1.4, 1.8, 1.14] **OR** c. Have the applicant complete the ENS form **and/or** d. Add another critical step that is within the bounds of K/A 2.4.30. Response:1a. Made recommended change. 1b. Made recommended change. 2. Added the following: - Non-critical step to determine that this event is a safety function failure/malfunction. - Non-critical step to obtain and review LS-AA-1020 to determine the potential reportability requirements. - Non-critical step to obtain and review LS-AA-1110 to review SAF 1.8 for reportability time limits. **OV Changes** - Will provide multiple copies of the Reportability Manual during the exam to facilitate multiple JPMs at the same time. - Took reference to simulator procedures out on page 4. **NRC: JPM SAT**
A-N-2-S	Reactivation of an SRO License (2.1.4)	2	X					X	X			~~U~~ S	NRC: 1. Simulator Setup Instructions provided - Is this JPM required to be performed in the simulator? 2. For DOCUMENT PREPARATION, change Item 1 to marked up copy of OP-AA-105-102 ATTACHMENT 2, REACTIVATION OF LICENSE LOG. 3. Add to DOCUMENT PREPARATION – Ensure that a copy of OP-AA-102, NRC ACTIVE LICENSE MAINTENANCE is

													available reference by applicant. 4. The filled-out copy of Attachment 2 is incomplete - Page 1 of 2 is not completed. Currently, the applicant is asked to perform a review of incomplete information which should have been completed *prior* to the operator standing their 40 hours of activation time. 5. The KEY does not include page 1 of Attachment 2. 6. Remove NOTE prior to JPM Step 1 Response: 1.This JPM is not required to be performed in the simulator. It is a tabletop JPM, which may be performed in the simulator, but needs no simulator setup. Added that it is not required to be performed in a simulator setting. 2. Made the recommended change. 3. Made the recommended change. 4. Added marked up copy of page 1 of Attachment 2. 5. Added page 1 of Attachment 2 to the Key. 6. Made the recommended change. **OV Changes** Took reference to simulator procedures out on page 4. **NRC: JPM SAT**
A-N-3-S	Equipment Control (2.2.14)	3						X	X			E	**Early Review Item**; **Previous 2 Exams** NRC: 1) The JPM Summary Form lists Suggested Testing Environment as “Plant,” but the Actual Testing Environment is “Other.” 2) The Note after Step 1 and the Acceptance Criteria require further clarification, such as examples of acceptable variations and what would not be allowed. 3) OP-AA-108-101 not provided in references **Facility**: 1) Changed Suggested Testing Environment to “Classroom” 2) There are so many possible examples of acceptable variations and what would not be allowed, that this should be addressed during execution of the JPM directly by the Facility Rep. 3) Reference will be provided during the Exam Submittal NRC: (Additional Comments for OV) 1. SIMULATOR SETUP INSTRUCTIONS: Separate items 2 & 3 from the SIMULATOR INSTRUCTIONS, and place in a separate section titled DOCUMENT PREPARATION or something similar (e.g., Test Location

													Setup) like other JPMs. 2. Instead of including the last ACPS number in the initial conditions, include it on a copy of OP-AA-108-101, Attachment 3, and provide it to the applicant (also add this to DOCUMENT PREPARATION list). 3. JPM step 1: remove "DOP." 4. NOTE prior to step 1: add Attachment 3 to list of items provided to the applicant and remove the associated CUE. 5. JPM steps 2 and 3 – There was disagreement regarding how to perform these steps per the referenced procedural guidance. Need to discuss with facility representative and validators and resolve at OV. 6. Evaluate including a procedure step reference (*4.3.1*) to JPM step 4 at OV. 7. Add a NOTE that JPM steps 2 through 4 may be performed concurrently. 8. This JPM raised questions for grading the Attachments and EST. To accurately and consistently grade this JPM, procedurally supported facility expectations for the critical and non-critical tasks are required. Response: 1. Made recommended changes. 2. Made recommended changes. 3. Made recommended change. 4. Made recommended change. 5. Will be discussed and resolved at **OV**. ---- *Discussed grading with NRC Evaluator during **OV** and all questions were answered. Discussed with Chief Examiner on phone call at the end of the validation day.* 6. A step for 4.3.1 is not required, since this is for departments other than Ops, which need assistance with completing and hanging ESTs. 7. Made recommended change. 8. To be addressed and resolved at **OV**. ---- *Critical and non-critical tasks were resolved with the NRC Evaluator and with the Chief Examiner on the end of day phone call. Specifically changed the N/As on the Attachment 2 Key to black signifying they are not critical.* **NRC: JPM SAT**

A-N-4-S	Review CCSW Activity Calculation (2.3.11)	2									X	~~U~~ S	1. Simulator Setup Instructions provided - Is this JPM required to be performed in the simulator? 2. Initiating cue – should provide more than "review and verify." Perhaps; "Perform supervisory review of the completed DOS 1500-08." 3. Why is the applicant only given data sheet 1 to review –the DOS is a continuous use procedure that's required to accompany Data Sheet 1. The entire procedure <u>with</u> the data sheet is what's scanned into passport. 4. The Note prior to JPM step 1 suggests that JPM steps must be completed in sequential order, since steps 2 and 3 are dependent upon identifying the dilution flow calculation error, step 4 is dependent upon recognizing (step 3) that result of step 2 still requires Part B of the data sheet to be completed, and step 5 is dependent upon completion of step 4. 5. Justify that this an SRO-only JPM as-is. Nothing in the procedure or the Data Sheet indicates a requirement for an SRO review. The applicant should be required to review the completed surveillance in its' entirety and complete the surveillance cover sheet (pass/fail, comments, IR, etc). Response: 1. This JPM is not required to be performed in the simulator. It is a tabletop JPM, which may be performed in the simulator, but needs no simulator setup. Added that it is not required to be performed in a simulator setting. 2. Made the recommended change. 3. The examinee is given a copy of DOS 1500-08 as part of the JPM. There is no impact on the JPM if the procedure is blank. A marked up copy of the DOS will be provided for the exam 4. Unsure what the comment is saying. The note before step 1 says the steps can be performed in any order. 5. Per FacRep this is an SRO only task at Dresden Station therefore the review is an SRO only task. The SRO-I On the Job Training Book has this as an SRO task, Task ID CM197991(1001). Refer

													to OJT book provided with these comments. **OV Changes** Following OV the following changes were made: - Changed the word 'Examiner' to 'Shift Manager' to allow the examiner to stay in role. This change was made at the NRC Examiner's direction. - Added note on page 2 of the key to say that the candidate should not sign the signature block due to errors identified. **NRC: JPM SAT**
A-N-5-S	Determine Emergency Classification (2.4.41)											E	NRC: 1. The Task Standard (p. 5) needs to consider the 15-minute critical time for initiating the Notification. a. The 15-minute limit for completing the NARS form should be shortened to allow for time to hand-off the NARS form and time to make the initial contact with the state/county b. A time of 12 minutes has been used in the past as a reasonable time. 2. Simulator Setup Instructions provided - Is this JPM required to be performed in the simulator? 3. Add K/A 2.4.30 or 2.4.40 as appropriate. 4. JPM step 1 can be split into separate sub-steps, for example: a. Using EAL HOT MATRIX determines applicable Recognition Category to be Fission Product Barrier (FPB) b. Using the data provided determines which Fission Product Barriers have been LOST and/or POTENTIALLY LOST. c. Classifies event as a SAE based on LOSS of the RC barrier AND POTENTIAL LOSS of the CT barrier. 5. STANDARD for JPM step 1 should include identification of the correct FPB Thresholds that were exceeded (i.e., the information in the 2nd Note following JPM step 1. 6. JPM step 2 should be "Properly fills out the NARS form and completes the hand-off to the communicator. 7. We have allowed Block 1 of the NARS form (drill/exercise) be considered a non-

													critical step in the past. Evaluate removing this from the critical completion steps on the key. Response: 1. Changed time limit for completing NARS form to 12 minutes. 2. This JPM is not required to be performed in the simulator. It is a tabletop JPM, which may be performed in the simulator, but needs no simulator setup. This is noted on page 4, and on the JPM summary sheet on page 9. Added that is not required to be performed in a simulator setting. 3. Added K/A 2.4.40 and importance. to JPM summary 4. Added steps for the individual fission product barriers, before the step where classification is performed. 5. Addressed by the addition of individual steps for each fission product barrier. 6. Made the recommended change. 7. Made the recommended change. **OV Changes** Made the following changes following OV: - Added EP-MW-114-100 to references of JPM due to having it available with JPM to hand to the candidate. - Added note to JPM body to not give the NARS form and EP-MW-114-100 to the candidates until they find it in the Shift Emergency Director's binder. - Added note to JPM body regarding Coolant Sample - Changed final note in JPM body to reflect if the candidate exceeds 15 minutes filling out the NARS form it will constitute a failure of the JPM. - Filled in Wind Direction and Speed on the NARS form key. Also, added note on key stating one or both wind speeds are required (refer to EP-MW-114-100, step 4.2.11.4) - Added NARS form to JPM to be given to the candidate - Changed the DW Radiation reading on Met Data sheet to reflect a more accurate reading. **NRC: JPM SAT**
Simulator / In-Plant	Safety Function and K/A												

JPMs													
S-N-a	SBLC - Injection with Pump and RWCU Failures (AP) 1 / 211000 A4.08	3										E	NRC: 1. May not use the Hard Card (Attachment A) and may use Section G of the procedure. Suggest a contingency for use of procedure Section G. 2. Why is Step 4 critical if pump will be turned off as C/S is rotated back though the OFF position? Response: 1. Added a note to allow for the possibility of the examinee using DOP 1100-02 instead of just the Hardcard. 2. Step 4 is not critical and has been changed appropriately. **OV Changes** Made the following changes following OV: - Added note after step 9 in JPM body to state that either Step 10 or 13 is critical, depends on which valve is closed first. **NRC: JPM SAT**
b:	N/A												
S-N-c	Alternate Depressurization Using Gland Seal Per DEOP 0500-073 / 295025 G.2.4.6	3	X	X								E	NRC: 1. SIMULATOR SET-UP – Gland Exhauster 2A trip light is overridden - is the C/S also overridden to prevent start if the applicant attempts to start it? 2. INITIAL CONDITIONS – Consider revising IC 2 to state “An event has occurred requiring Alternate Emergency Depressurization.” 3. Other than valve position indication for S2, is there other feedback to indicate that a flow path has been established (e.g., Steam Seal pressure rising or alarms) indicating that the R2 relief valve is OPEN? Response: 1. Added command to CAEP file to turn the CLOSE position of control switch OFF, preventing the 2A Gland Exhauster from starting 2. Made recommended change 3. Unknown, this will be determined during Onsite Validation. **OV Changes** Made the following changes after OV: - Determined that there is **no** overt feedback as to whether there is flow or not.

													NRC: JPM SAT
S-N-d	Swap Stator Cooling Pumps with Failure of PCV (AP) 4 / 245000 K6.05	3	X								X	E	**Early Review Item**; **New** NRC: The reference procedures and DANs were not provided in references. **Facility**: References were provided in the Exam Submittal. NRC: "AS-SUBMITTED" JPM Comments - 1. The examinee was assigned the role of Aux NSO. In that position, it would not be the operator's responsibility to SCRAM the reactor. (The applicant could be in the reactor operator role with the Aux NSO simply unavailable.) 2. Consider *either* changing the PCV failure to a point where restarting the standby pump will stop the runback (May require defeating auto-start feature of standby pump). 3. **OR** (instead of 2 above) change the setup so FCL is < 93% to preclude the need for an immediate SCRAM Response: 1. Changed role to U2 NSO. 2. The purpose of the JPM is to ultimately scram the reactor. 3. If the FCL is <93% and if the examinee doesn't perform any actions <8 ½ bypass valves will open and no other actions would be required. **OV Changes** Made the following changes after OV: - Added direction to Simulator Setup Instructions to ensure the proper screens are displayed on the DEHC screens. - Added EO communications to body of JPM - Made step 3 in the JPM body critical per NRC Evaluator - Changed validation time to 10 minutes per NRC Evaluator - Corrected Critical Tasks throughout JPM **NRC: JPM SAT**
S-N-e	Aux Power - Transfer Aux Power 6 / 262001 A4.04	3				X						E	NRC: 1. For breaker C/S operation, should the JPMs steps include: ",,, and release" following operation of the breaker? Would the control switch need to be released for the breaker logic to function properly? 2. Add a step/cue to address procedure step G. 7 performance. Response: 1. Added "…and release" and made the

													steps easier to read. 2. Added steps to address procedure step G.7. **OV Changes** No changes based on OV. **NRC: JPM SAT**
S-N-f	Withdraw SRM Detectors with a Stuck SRM Detector (AP) 7 / 215004 A4.04	3		X				X				E	1. DOCUMENT PREPARATION – Instead of the cue to address typo in procedure step G.1.f, consider making the correction (pen & ink) in the marked-up copy of the procedure. 2. INITIAL CONDITIONS – consider removing IC 3; this can be easily verified by the examinee. 3. For the NOTE following JPM step 5; The first sentence could say that "The examinee may continue to fully withdraw SRMs 21, 23, and 24 before taking actions to address SRM 22." 4. JPM step 9 STANDARD should include that the examinee maintains count-rate less than 8.85E4 CPS (less than Rod Block setpoint) IF the DOP requirement is applicable in the DOA. Response: 1. Made pen & ink change in procedure and added that to the note. 2. Made recommended change. 3. Made recommended change. 4. The DOA supersedes the DOP and therefore the DOP requirements are no longer applicable. **OV Changes** Made the following changes after OV: - Changed step 1 in JPM body to say: WHEN at least one IRM down scale alarm has cleared, THEN start SRM withdrawal and maintain SRM count rate 290 cps to 8.85x104 cps. **NRC: JPM SAT**
S-N-g	RBCCW – Swap RBCCW Pumps with Pump Trip (AP) 8 / 400000 A4.01	2										E	NRC: 1. SIMULATOR SETUP – Address how the auto re-start of 2B RBCCW is prevented. 2. For JPM step 4 STANDARD; how is the examinee's entry into DOA 3700-01 to be verified by the evaluator? (Is this transition documented?) 3. Consider removing the reference to the DOA transition. This will be verified when the examinee immediately starts the standby pump (JPM step 5). Response:

													1. There is no auto start for the RBCCW pumps. 2. Made recommended change. 3. Made recommended change. **OV Changes** Made the following changes after OV: - Changed validation time to 8 minutes as directed by NRC Evaluator. **NRC: JPM SAT**
S-N-h	SBGT - Start Standby Gas Treatment 9 / 261000 A4.02						~~X~~					E	NRC: 1. Consider revising JPM step 11 to state: "Record start time in the SBGT Time Log … and notify …" 2. Overlaps with Scenario 2/Event 1. Replace the event or this JPM. Response: 1. Per FacRep it is low value to add logging the start time of SBGT and historically this has not been done for this JPM. 2. Scenario 2, Event 1 was replaced. **OV Changes** Made the following changes after OV: - Added step 5 to Initial Conditions of Cue sheet on both Evaluator and Candidate copies (No Dry Cask activities in progress). **NRC: JPM SAT**
S-N-i	Containment – Bypass Drywell Cooler Trip 5 / 295028 EA1.03	3	X									E	1. INITIAL CONDITIONS (IC) – Which higher tier DEOP(s) was/were being implemented to trigger the performance of this task? Consider including that information in the ICs. 2. Do panel doors need to be opened? If so, setup should include obtaining permission to open panel doors. 3. Consider adding a pointing device (laser, tight beam flashlight) to the list of required materials 4. Evaluate deleting JPM step 3. 5. Evaluate and list safety requirement expectations for breaking the plane of an energized panel to lift leads (100% cotton, long sleeves, no metal, etc.) Also evaluate at what point lapses would result in JPM failure. Response: 1. Added DEOP 200-1 to Initiating Cue. 2. Panel doors will need to be opened and the exam author will inform the shift that in-plant JPMs are being performed and the possibility to open panels exists and the examinees will not break the plane of the panel. It is also part of the Pre-job

													Brief the exam author will give the examinees prior to their JPMs. 3. Per FacRep lasers should not be utilized in the Aux Electric Room. The examinees should have a flashlight with them and if not, they will be able to point to the required items in the panel. 4. Made recommended change 5. If the examinee breaks the plane of the panel then the examiner will stop them and tell them they are breaking the plane of the panel. They get one "freebee" and if they break the plane of the panel again then the JPM is failed. This is also told to the examinees during the Pre-job Brief prior to their JPMs. **OV Changes** No changes based on OV. **NRC: JPM SAT**
S-N-j	Swapping 2/3 EDG Cooling Water Flow (AP) ~~6~~ **8**/ 264000 G.2.1.20	3										E	1. This JPM task is categorized as a Safety Function 6 (Electrical-Emergency Diesel Generators) but should be categorized as Safety Function **8** (Plant Systems – Component Cooling Water). Correcting the safety function requires replacing either this JPM **or** JPM S-N-k. 2. DOCUMENT PREPARATION – Provide a marked-up copy of the procedure since the INTIAL CONDITIONS state that a Pre-Job brief was completed. 3. The NOTE, prior to JPM step 3, should reflect values observed for each of the expected as found flow direction. a. Inlet/Outlet Valves in 2-3 position: Top 24 psig and Bottom 17 psig b. Inlet/Outlet Valves in 1-2 position: Top 17 psig and Bottom 24 psig 4. OR change the cue after JPM step 1 to specify as-found valve positions (which eliminates need for the Note above). Also, the valve positions in steps 12 and 13 could be specified rather than having the evaluator referring to Table 1. 5. In JPM step 13 through 16, cues are needed to provide consistent feedback for equipment manipulations. Response: 1. JPM S-N-k has been replaced and Safety Function for this JPM has been changed to 8. 2. Marked up copy of procedure will be provided with prerequisites marked off.

													3. Added clarification as to what is Top to Bottom or Bottom to Top flow. 4. Comment 3 addresses this 5. Added Cues to steps 13-16 of JPM. **OV Changes** Made the following changes after OV: - Added note before Step 16 of JPM referring to error in procedure and that an IR will be generated following the exam. - Added note before Step 10 of the JPM to refer to Enclosure 1 for operation of the EDG Cooling Water valves. - Added Enclosure 1 which is a picture with descriptions of the valve components and operation of the worm gear. **NRC: JPM SAT**

S-N-k	~~Crosstie Unit 2 and Unit 3 Instrument Air Headers~~ ~~8~~ / ~~295019 AA1.02~~ Take action for a Failed Relief Valve **3** / 239002. A2.03	2			X							~~U~~ S	1. DOC DOCUMENT PREPARATION – Provide a marked-up copy of the procedure since the INTIAL CONDITIONS state that a Pre-Job brief was completed. 2. Per step G.8 of DOP 4700-03, the applicant is only required to open <u>one</u> of the two crosstie valves ("…by opening **one/both** of the following:") – please evaluate why it is *essential* that the applicant open **both** valves. If only one valve must be open to crosstie the headers, there is only 1 critical step and the JPM is UNSAT. 3. Refer to S-N-j, Comment 1 (SF**8**) <u>Response:</u> 1. Replacing this JPM. 2. Per initiating cue the examinee was directed to open BOTH valves therefore it would be critical to fulfil the JPM. 3. Replacing this JPM. **<u>OV Changes</u>** Made the following changes after OV: - Replaced JPM - Added in "Document Preparation" to include a copy of the DOA 0250-01 Table 1 as Enclosure 1. This is **<u>not</u> embedded** in the JPM but is included in the Master paper copy and will be included in the JPM when it is administered. - Added "Other Preparation" to setup page to ensure a laser pointer is provided to the Evaluator for use during the JPM. - Added Note after Step 1 of the JPM for cues if the wrong fuse is pulled by the candidate. - Changed the name of the JPM on the footers and on the Summary to reflect the proper nomenclature. - Added to first note possible locations for fuse pullers. **<u>NRC</u>: JPM SAT**

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: Dresden	Scenario: ILT-N-2 (was Early Submittal N-3)						Exam Date: June 8-12, 2020		
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
Items changed to SEG not involving Events									**OV Changes** - Updated cover page for correct events - Added APRM #6 info and TS info to Scenario Summary on page 2 - Updated Event 1 on Scenario Summary on page 2 - Added APRM #6 and TS info to Scenario Initial Conditions on page 3 - Updated Event 1 on Scenario Sequence chart on page 3 - Updated Event 1 on page 4 - Updated Event 6 on page 5 - Added verifying MCC 28-7/29-7 powered from Bus 28 and hanging LCO sheet to Step 3 on Pre-Scenario Activities on page 6
~~1. Swap SBGT trains Primary/Standby~~ 1. Transfer MCC 28-7/29-7 from Bus 28 to Bus 29				X			X	~~U~~ S	**Early Review Comments** NRC: Minimal discriminatory value evident for this event. Actions are taken initially, and all verifications are performed afterward? Facility: Verifications will take place when the "CO" is hung during the next shift. **Submittal Review** Overlaps with submitted JPM (S-N-h). Replace event or replace JPM. Response: 1. Event has been replaced. **OV Changes** Changed event and no further changes were made during OV.
2. Continue Raising Power Using Control Rods								E	**Submittal Review** 1. Why are BOP verification for control rod movement different from RO(ATC) verification actions? Shouldn't they be the same? 2. Are all control rod movements for this event expected to be by continuous motion? If control rods are (or could be) notched out, then ATC action should reflect any differences. Response: 1. The verification steps are different from the ATC actions, they are just verifying the actions are correct. The sim guide has the actions directly off of Operator Aid 239 which is mounted right next to the RWM. 2. All of the control rod movements are expected to be by continuous motion. **OV Changes** No changes made during OV
3. Inst Air Compressor Swap Due to Oil Leak on Running Compressor								E	Like 2017 Scenario ILT N-1, Event 6 (SAC Oil Leak) – This event involves IAC and different DOA (Abnormal Response). **Submittal Review**

									1. Consider revising the oil level report to include "…band and slowly lowering." Also, is the recommendation to stop the compressor is necessary; examinee should make this conclusion on their own. 2. Event 3 Completion Criteria – Consider adding "and Unit 3 IAC shutdown/tripped" to first criterion. Response: 1. Made recommended change. 2. Made recommended change. **OV Changes** The following changes were made after OV: - Changed "slowly" to "rapidly" in second communication of Event 3. - Added third communication in Event 3 if crew is not making progress
4. RPS - MG Set, Trips / Re-energize from Reserve Power					X			E	Event was used in the 2016 Exam (3 exams back) Scenario ILT N-3, Event 6 **Early Review Comments** NRC: Is it possible to have the SRO determine the operability of RPS EPAs versus simply stating that they are inoperable? Facility: Engineering would make this determination and give the information to the SRO. **Submittal Review** 1. Consider revising the 2nd and 3rd sentences of the engineer report to state that "RPS EPAs 2B-1 and 2B-2 may not trip when required. All other EPAs are expected to operate as expected." 2. The 2016 event referenced above included a Tech Spec application related to TS 3.3.7.1. Should this be included in this event also? Additionally, have the Tech Specs been thoroughly reviewed for any other systems/components impacted by the loss of RPS power? Response: 1. Made recommended change. 2. Reviewed Tech Specs and added 3.3.7.1, condition A, due to loss of RPS power. Also added that the crew may elect to enter TS 3.3.6.2, condition A, but that the requirements of that LCO are already met. **OV Changes** Made the following changes after OV: - Added Cond A as required for TS 3.3.8.2 - Moved TS 3.3.7.1 and 3.3.6.2 to after the RPS MG Set trip, they are applicable after it trips. - Made TS 3.3.6.2 required - Added Floor Instructor Role Play

5. Service Water Pump, Trip Due to Overcurrent								E	**Submittal Review** 1. Add a NOTE that starting a standby Service Water pump is an immediate action in DOA 3900-01. 2. The Role Play for EO dispatched to the Cribhouse should include a report that the 2B pump shaft has stopped and is not rotating in reverse. 3. Is placing the 2B Service Water Pump in PTL a required action or normal; it is currently indicated as a required action (closed bullet). 4. CRS action for referring to TRM (TLCO 3.7.i) should state that NO action is required; remove TLCO required action statement. Response: 1. Made recommended change. 2. Made recommended change. 3. It is a required action of DOA 6500-10, when a 4kV breaker is tripped on overcurrent the control switch is placed in PTL. 4. Made recommended change. **OV Changes** No changes were made during OV
~~6. 2A Recirculation Flow Controller Fails Upscale~~					~~X~~			~~E~~	**Early Review Comments** NRC: Possible TS 3.4.1.B.1 entry on flow mismatch? – is it expected? (It is counted as a TS on the D1 Form – but it is noted as "If required") Facility: The expectation is that the SRO will reference the Tech Spec for flow mismatch and make the determination if the LCO is needed to be entered. **Submittal Review** Event replaced by the following.
~~6. APRM 2 Fails Upscale (As Submitted)~~ 6. APRM 4 Fails Upscale					~~X~~			E	**Submittal Review** Update D1 to reflect correct malfunction number. Response: Made recommended change **OV Changes** Made the following changes after OV: - Changed to APRM 4 - Changed expected alarms - Made TS a required call - Added TRM 3.3.a information
~~7. Manual Scram - LOCA in drywell / ATWS - 7 Stuck rods (4 rods will be able to moved, QNE determination will be need to determine if the Reactor will stay shutdown)~~ 7. Small Steam Leak in Drywell	X					XX	X	E	**Early Review Comments** NRC: A list of Critical Tasks is needed in the scenario guide which elaborates on what is expected and by when for successful completion. Facility: Critical Tasks are listed on page 2 of the scenario and then in the body of the scenario is the description of what the operator needs to perform to meet the Critical Task. **Submittal Review** 1. Update D1 to reflect correct malfunction ID for a steam line break (should be I21 instead F41). 2. Recommend making the incomplete SCRAM a separate component malfunction (or separate Major event). It does not significantly contribute to the Major Event (Small Steam Leak/LOCA). 3. Regarding the small steam leak;

									a. The small steam line break is very similar to the Small Steam Line Break Event (6) from the 2019 ILT Exam. The ensuing ATWS events are significantly different. b. If the break is small enough to allow implementation of DOA actions, then perhaps the event could be counted as a component failure. c. Are there three (3) MAJOR events here? - 1) Incomplete SCRAM; 2) Loss of High-Pressure Injection; and 3) Steam Line Break/LOCA challenging the Containment. Consider deleting either the loss of HP injection or the increase in break size (see the Event 8 comments below). d. For the Role Play – The only indication of a leak appears to be a slow increase in Drywell pressure. Is it likely that the EOs would be dispatched to check for leaks in a timely manner? e. For the stuck control rods – If the SCRAM was not reset, what prevents the control rods from SCRAMMING when the malfunctions are removed? Response: 1. Made recommended change 2. Split incomplete scram into separate component malfunction. Deleted portion with loss of RFP and failure of HPCI to auto initiate. 3. a. No additional comments. b. See 2 above. c. Revised to have one major event (SCRAM on steam break / LOCA) and changed failure to scram to a component failure. d. Removed role play to check for leaks. e. The setup of the simulator computer prevents a scram for those control rods. **OV Changes** Made the following changes after OV: - Added 4700 counts to the DW Cam report - Changed first bullet to a closed bullet
~~8. Loss of RFPs/ (NEW) HPCI Auto-start failure~~ 8. ATWS – 7 Stuck Rods						X		E	**Early Review Comments** NRC: A list of Critical Tasks is needed in the scenario guide which elaborates on what is expected and by when for successful completion. Facility: Critical Tasks are listed on page 2 of the scenario and then in the body of the scenario is the description of what the operator needs to perform to meet the Critical Task. **Submittal Review** 1. NOTE for Trigger 7 says RFPs trip 10 seconds after Mode Switch in SHUTDOWN. Setup on page 22 says 60 seconds. Which is true? 2. Consider moving actions for change in leak size to a separate event or delete (See Event 7 comments). 3. Containment Control DEOP – Actions should include operation/restoration of Drywell Cooling. Response: 1. Removed trigger 7 as part of scenario event 7 changes outlined above.. 2. Removed the change in leak size as part of scenario 7 changes outlined above.

									3. We would not take action to start drywell coolers with a LOCA in the drywell, due to the possibility of equipment damage or electrical shorts. **OV Changes** Made the following changes after OV: - Added required action for ATC to place the MSIV LO-LO LOW LEVEL switches in BYPASS - Added or DW > 2.0 psig to first line in CRS - Deleted last bullet in last CRS section, RWL will not lower below TAF and therefore SBLC shouldn't be started in the scenario.
8 Events (TOTALS)									

Facility: Dresden	Scenario: ILT-N-4								Exam Date: June 8-12, 2020
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
Items changed to SEG not involving Events									**OV Changes** - Added Exercising CRDs to Turnover of Scenario Outline. - Changed Critical Task RPV-1.2 per NRC Evaluator. - Removed blank page 3. - Corrected typo in CAEP file. - Added "stall flows are required to be recorded" to crew turnover sheet.
1. Swap TBCCW Pumps								S	**OV Changes** No changes made during OV.
2. Stuck Control Rod								E	**OV Changes** - Changed first note from "when second rod is selected" to "when CRD D-09 is selected." And added direction to provide the crew a copy of DOP 0400-01 if they reference it in the books. - Capitalized "CRD FLOW CONTLR" - Added actions for exercising the 2 rods that are not stuck.
3. 2B RFP TRIP / RECIRC RUNBACK								E	**OV Changes** - Added "2B RFP" to the report from the EO about checking 2B RFP. - Added EO communication about status of oil leak - Added QNE communication about core parameters - Removed reference to Speed Hold out of both ATC and CRS sections at the end of the event.
4. 2B Fuel Pool Rad Monitor Fails Upscale With Failure of RB Vent Dampers to Isolate					XXX			E	**OV Changes** - Correct annunciator reference in BOP section. - Added condition A to TS 3.3.6.2 - Changed closed box to open box in BOP section towards end of event for dispatching operator to check SBGT operation.
5. High Pressure Feedwater Heater Trip								E	**OV Changes** - Change name of event throughout the scenario to "High Pressure Feedwater Heater Trip" from "HP Heater Trip" - Added "wait 3 min" to communication for EO to check heaters locally - Added communication about 2A & 2B MSDTs - Changed closed bullet to open bullet on second bullet in BOP section.
6. Isolation Condenser Tube Leak					X			E	**OV Changes** - Put page between events 5 & 6. - Added Security communication about IC being unavailable.
7. Recirc Leak in DW – Manual Scram								E	**OV Changes** - Changed closed bullet to open bullet in BOP section for initiating Torus Cooling.

8.	Loss Of High Pressure Feed / Recirc Loop Leak / Emergency Depressurization						XX		E	**OV Changes** - Added bullets for starting SBLC and CRD for level control to ATC and CRS sections - Removed "lining up high pressure alternate injection….." line from second CRS section. - Added critical task √ to inhibit ADS in second CRS section. - Removed critical task symbol for securing Torus and Drywell sprays before 0 psig as they are applicable to the scenario and made them open bullets. - Added critical task symbol to CRS section for opening ADS valves.

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: Dresden **Exam Date: June 8-12, 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	9 Explanation
2	8	1	3	0	2	0	12.5%	E	
3 (**Spare**)									
4	8	0	4	0	2	0	0	E	Scenario was a replacement provided at OV.
Spare									

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.

Facility: Dresden **Exam Date:**

OPERATING TEST TOTALS

	Total	Total Unsat.	Total Edits	Total Sat.	% Unsat.	Explanation
Admin. JPMs	5	2	3	0		
Sim./In-Plant JPMs	10	1	9	0		
Scenarios	2	0	2	0		Does not include **spare** scenarios.
Op. Test Totals:	17	4	14	0	17	

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).