

**NRC REVIEW AND COMMENTS TO THE**

**THE WRITTEN EXAMINATION AND OPERATING TESTS**

**FOR THE PRAIRIE ISLAND INITIAL EXAMINATION**

**THE WEEKS OF SEPTEMBER 10 AND 17, 2001**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
1 S-1	H	3					*						OK	Y	U S	New. Question reviewed in detail. (1) No correct answer based on references provided. Reference indicates TS 3.10.F. TS 3.10.F is for Mode 1 & condition in stem is subcritical. (2) Distractors C & D identify Rod G-7. Not enough information in stem to determine rod G-7 is affected rod. Recommend removing reference to rod G-7. QUESTION REPLACED. MODIFIED, REFERENCE CHECKED OK, QUESTION REVIEWED IN DETAIL. HIGHER LEVEL, LOD-3, Q=K/A, SRO ONLY. PREVIOUSLY USED ON 2000 KEWAUNEE EXAM. DISTRACTOR D TOO CLOSE TO A POSSIBLE CORRECT ACTION. DISTRACTOR D REVISED.
2 S-2	F	2											OK	Y	E	New. Reference check OK. Question reviewed in detail. (1) Not sure this is SRO level of knowledge. May be able to use as Higher if needed. (2) In stem, recommend capitalizing the word "MINIMUM." ENHANCED AS RECOMMENDED.

**Instructions**

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).
- Check the appropriate box if a psychometric flaw is identified:
  - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
  - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
  - The answer choices are a collection of unrelated true/false statements.
  - More than one distractor is not credible.
  - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
- Check the appropriate box if a job content error is identified:
  - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
  - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
  - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
  - The question requires reverse logic or application compared to the job requirements.
- Check questions that are sampled for conformance with the approved K/A and those that are designated SRO-only (K/A and license level mismatches are unacceptable).
- Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
- At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
3 R-1 S-2 5-3 JH	H F	2											OK		E	New. Reference check OK. Question reviewed in detail. (1) Memory level (i.e., do you recall the procedure requirement); Licensee indicated Higher. (2) In stem, recommend stating times of the shift vice previous evening in order to ensure there is no question that the logs have been archived. (1) AGREED QUESTION WAS FUNDAMENTAL LEVEL. (2) ENHANCED AS RECOMMENDED.
4 R-2	F	2											OK		E	Bank. Reference check OK. Question reviewed in detail. (1) Recommend changing distractor C to ... "finds the valve out of position." (2) Recommend revising distractor D because it may be a bit too close to correct. While the procedure states IV is required unless radiation levels are deemed excessive, high contamination is still an ALARA concern. (1) DISTRACTOR C MODIFIED TO ... "FINDS THE VALVE IN THE REQUIRED POSITION." (2) DISTRACTOR D NOT MODIFIED. JUSTIFICATION WAS DISTRACTOR D TEST KNOWLEDGE THAT UNDER HIGH RAD CONDITIONS, THE "IV" DOES NOT NEED TO BE PERFORMED BUT THE LEVEL OF ANTI-Cs IS ON A VALID REASON TO FORGO THE "IV" STEP.
5 R-3 S-4	H	3											OK		S	New. Reference check OK. Question reviewed in detail.
6 R-4 S-5	F	2											OK		E	New. Reference check OK. Question reviewed in detail. While the question meets the K/A, are there any other more significant differences (i.e., control board layouts, systems, instrumentation, or procedure actions) between the units? NO CHANGES MADE.
7 S-6	H	3				*							OK	Y	E	Bank. Question reviewed in detail. (1) Reference material supplied does not support correct answer. (2) Recommend revising distractor D because it appears to contradict information in the stem (i.e., U-1 SS & U-2 SS have reviewed and approved). (1) PROVIDED ADDITIONAL REFERENCES TO SUPPORT CORRECT ANSWER. MODIFIED STEM BY ADDING "A SAFETY RELATED SYSTEM." (2) BECAUSE OF CHANGES IN STEM, NO NEED TO MODIFY DISTRACTOR D.
8 R-5 S-7	H	3 2											OK		S	New. Reference check OK. Question reviewed in detail.
9 R-6 S-8	H	3						X					OK		E	Modified. Reference check OK. Question reviewed in detail. This seems to be a lot of TS memorization for an RO. NO CHANGES MADE. LICENSEE INDICATED THIS LEVEL OF DETAIL EXPECTED OF ROs.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
10 S-9	F	3											OK	Y	E	Modified. Reference check OK. Question reviewed in detail. Recommend revising distractor C and eliminate "(lower Keff)." It may be confusing. ENHANCED AS RECOMMENDED.
11 R-7 S-10	H	2											OK		E	New. Reference check OK. Question reviewed in detail. Minor editing change recommended in stem. (In first sentence of the last paragraph of the stem revise to read as follows ...properly documented. What is the....) ENHANCED AS RECOMMENDED.
12 R-8	F	3											OK		S	Bank. Reference check OK. Question reviewed in detail.
13 S-11	H	3		✖		X							OK	Y	E	New. Reference check OK. Question reviewed in detail. (1) Distractor A not credible because given the conditions in the stem, there would be an attempted rescue. Revise distractor A. (2) Recommend revising distractor C. The phrase "... only qualified individual..." is not supported by the reference material. Additionally, the need for qualified individuals to complete a task is always a requirement. (1) LICENSEE INDICATED DISTRACTOR A WAS CREDIBLE SINCE THERE ARE CONDITIONS WHERE LIMITS APPLY (I.E., PROPERTY PROTECTION ISSUES). (2) IN DISTRACTOR C, THE WORDS "ONLY QUALIFIED" WERE REMOVED.
14 S-12	F	2							X				OK	Y	E	Bank. Reference check OK. Question reviewed in detail. The question appears to require the recall of knowledge too specific for a closed reference test (i.e., conditions for containment entry). NO CHANGES MADE. LICENSEE INDICATED THIS LEVEL OF DETAIL EXPECTED OF SROs.
15 R-9	F	2							X				OK		E	Bank. Reference check OK. Question reviewed in detail. The question appears to require the recall of knowledge too specific for a closed reference test (i.e., precautions & limitations in an Operating Procedure for release of radioactive gas from a gas decay tank). NO CHANGES MADE. LICENSEE INDICATED THIS LEVEL OF DETAIL EXPECTED OF OPERATORS.
16 R-10 S-13	H F	3							X				OK		E	New. Reference check OK. Question reviewed in detail. (1) Memory level. Only need to recall requirements in procedure to correctly answer question. Licensee indicated Higher. (2) The question appears to require the recall of knowledge too specific for a closed reference test (i.e., procedural requirements in an Operating Procedure for Containment In-Service Purge System - Short Term Release). (3) In stem, recommend capitalizing the word "PREVENT." (1) LICENSEE AGREED FUNDAMENTAL LEVEL. (2) LICENSEE INDICATED THIS LEVEL OF DETAIL EXPECTED OF OPERATORS. (3) ENHANCED AS RECOMMENDED.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
17 R-11 S-14	F	3				X							OK		E	New. Reference check OK. Question reviewed in detail. Recommend modifying distractor C. The stem refers to the response concerning "the alarms" (i.e., alarms associated with the testing) while distractor C is focused on alarms not associated with the testing. NO CHANGES MADE.
18 R-12 S-15	F	2											OK		S	New. Reference check OK. Question reviewed in detail.
19 S-16	F	2											OK	Y	S	New. Reference check OK. Question reviewed in detail.
20 R-13 S-17	F	2				*							OK		U S	Modified. Reference check OK. Question reviewed in detail. Appears to be two correct answers. While distractor A is correct, it is not incorrect to continue with the Immediate Actions in 2E-0 (distractor B). The unstated assumption could be that the actions in the response not obtained column were being carried out (i.e., restore power per the AOP) and the Immediate Actions in 2E-0 were being continued (IAW EOP usage guidance). DISTRACTOR B MODIFIED. FUNDAMENTAL LEVEL. LOD = 2.
21 R-14	F	2											OK		S	New. Reference check OK. Question reviewed in detail.
22 R-15	F	2											OK		E	Bank. Question reviewed in detail. (1) Reference material supplied does not support correct answer. (2) In stem, recommend capitalizing the word "FAILED." (1) REFERENCE MATERIAL PROVIDED. (2) ENHANCED AS RECOMMENDED.
23 R-16	H	2											OK		S	Modified. Reference check OK. Question reviewed in detail.
24 R-17 S-18	H	4											NO OK		U S	Bank. Reference check OK. Question reviewed in detail. Unsure how question matches K/A. Question asks given the following symptoms, what occurred and what do you do. The K/A is knowledge of effect of loss or malfunction of RCP seals has on RCP. QUESTION REPLACED. NEW, REFERENCE CHECK OK, QUESTION REVIEWED IN DETAIL. HIGHER LEVEL. LOD = 4.
25 R-18 S-19	H	4											OK		S	Bank. Reference check OK. Question reviewed in detail.
26 R-19 S-20	H	3											OK		E	New. Reference check OK. Question reviewed in detail. Basis for correct answer not clear. Recommend revising basis for correct answer. NOT CLEAR IF BASIS FOR CORRECT ANSWER WAS MODIFIED.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
27 R-20	H	3							X				OK		E	Bank. Reference check OK. Question reviewed in detail. The question appears to require the recall of knowledge too specific for a closed reference test (i.e., knowledge of procedural steps in AOP that are not immediate actions). NO CHANGES MADE. LICENSEE INDICATED THAT FACILITY OBJECTIVES SUPPORT LEVEL OF DETAIL. LICENSEE INDICATED QUESTION TESTS UNDERSTANDING OF RHR SYSTEM FLOW PATHS AND HOW OPERATION OF VALVES CONTROLS FLOW.
28 R-21 S-21	H	3											OK		S	New. Reference check OK. Question reviewed in detail.
29 R-22 S-22	H F	3					*		*				OK		U S	New. Reference check OK. Question reviewed in detail. (1) No correct answer based on references provided. (2) The question appears to require the recall of knowledge too specific for a closed reference test (i.e. knowledge of accident analysis from UFSAR related to containment peak pressures). QUESTION REPLACED. BANK, REFERENCE CHECKED OK. QUESTION REVIEWED IN DETAIL. FUNDAMENTAL LEVEL. LOD = 3.
30 R-23 S-23	F	2											OK		S	Bank. Reference check OK. Question reviewed in detail. (NOTE - # 1 - # 30 early review)
31 R-24 S-24	H	4											OK		S	Modified. Reference check OK. Question reviewed in detail.
32 R-25 S-25	H	3											OK		S	New. Question reviewed in detail. (1) Reference provided not support correct answer. (2) This question is difficult. (1) ADDITIONAL REFERENCE MATERIAL PROVIDED. (2) LICENSEE INDICATED OTHER QUESTIONS IN EXAM SIMILAR LEVEL OF DIFFICULTY.
33 R-26 S-26	H	4	*										OK		E	New. Question reviewed in detail. (1) References provided initially not support correct answer. (2) The stem asks for expected reactor response and the distractors are reactor response AND the use of procedures). Recommend revising stem to elicit procedure usage part of response. (3) Recommend modifying Distractors B & C to indicated manually tripping reactor if conditions require. (1) ADDITIONAL REFERENCE MATERIALS PROVIDED TO SUPPORT CORRECT ANSWER. (2) & (3) ENHANCED AS RECOMMENDED.
34 R-27 S-27	H	3											OK		S	New. Reference check OK. Question reviewed in detail.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
35 R-28	H	3											OK		S	New. (Lesson plan indicates the question was used on 1995 NRC exam.) Reference check OK. Question reviewed in detail.
36 S-28	H	4	X										OK	Y	E	Modified. Reference check OK. Question reviewed in detail. Unsure how information about Control Bank C relates to question? It appears to add information not needed to answer the question and to make the question artificially difficult. NO CHANGES MADE. LICENSEE INDICATED THE INFORMATION ON BANK "C" RPI WAS NEEDED TO CONSIDER DISTRACTOR B & C AS PLAUSIBLE.
37 S-29	F	2											OK	Y	S	New. Reference check OK. Question reviewed in detail.
38 R-29 S-30	H	3											OK		S	Modified. Reference check OK. Question reviewed in detail.
39 R-30	F	2											OK		S	Bank. Question reviewed in detail. Reference provided not support correct answer. ADDITIONAL REFERENCE MATERIAL PROVIDED.
40 R-31 S-31	H	3											OK		E	Bank. Reference check OK. Question reviewed in detail. Recommend revising Distractor C to clearly make it incorrect. It is very close to the correct answer. DISTRACTOR "C" MODIFIED.
41 R-32 S-32	F	2											OK		E	Bank. Question reviewed in detail. (1) Reference provided not support correct answer. (2) In stem, recommend capitalizing the word "DISABLED." (1) ADDITIONAL REFERENCE MATERIAL PROVIDED. (2) ENHANCED AS RECOMMENDED.
42 R-33 S-33	F	3					*						OK		U S	Modified. Reference check OK. Question reviewed in detail. Distractors B, C, & D may be correct. Attachment A, 2ES-0.1, does not specify which instrument to use, only parameters to verify. The original question (2000 NRC exam) does not have this concern. MODIFIED STEM AND DISTRACTORS A & C.
43 R-34 S-34	H	2	*										NO OK		U S	Modified. Reference check OK. Question reviewed in detail. (1) Unsure what makes 16 - 18 deg & 19 - 20 deg a meaningful difference? (2) Based on the information in the basis for answers, it appears that the question was attempting to require the Applicant to understand that adverse containment conditions (i.e., containment pressure) did not affect sub-cooling monitor indications. (3) Unsure how question matches K/A. K/A is for operational implications and question asks Applicant to recognize indications of superheating. QUESTION REPLACED. NEW, REFERENCE CHECK OK. QUESTION REVIEWED IN DETAIL. DISTRACTOR B TOO CLOSE TO POSSIBLE CORRECT ANSWER. DISTRACTOR B MODIFIED. HIGHER LEVEL. LOD = 2.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
44 R-35	H	3											NO OK		U S	New. Reference check OK. Question reviewed in detail. (1) K/A is two parts. The question does not address the ability to predict the impact of the malfunction. QUESTION STEM MODIFIED TO ADD CONSEQUENCES (I.E. PREDICT THE IMPACT) AND DISTRACTORS MODIFIED (FOR SAME REASON). HIGHER LEVEL. LOD = 3.
45 R-36 S-35	H	4											OK		S	New. Reference check OK. Question reviewed in detail.
46 R-37 S-36	H	3		X									OK		E	New. Reference check OK. Question reviewed in detail. Concern is that if the Applicant only recalls that NaOH is for iodine removal, then there is only one distractor with iodine (the correct answer). Recommend revising one of the distractors to add iodine. NO CHANGES MADE.
47 R-38 S-37	F	3											OK		S	New. Reference check OK. Question reviewed in detail. The question appeared to require the recall of knowledge too specific for a closed reference test (i.e. power supplies for CS pump discharge MOVs). Licensee provided justification for recall of knowledge from memory.
48 R39 S-38	F	3		X									OK		E	New. Reference check OK. Question reviewed in detail. The distractors only give two choices (DG & no power) with the DGs being 3 of the choices. The distractors need balance. NO CHANGES MADE. LICENSEE INDICATED THE CHOICES WERE THE ONLY LOGICAL CHOICES FOR THE FAN CONDITIONS.
49 R-40 S-39	F	3											OK		S	Modified. Reference check OK. Question reviewed in detail. The question appeared to require the recall of knowledge too specific for a closed reference test (i.e. RNO in step 26 of ES-1.1 ). Licensee provided justification for recall of knowledge from memory.
50 R-41 S-40	H	3											OK		S	New. Reference check OK. Question reviewed in detail.
51 R-42 S-41	F	2											OK		S	Bank. Question reviewed in detail. Reference not support correct answer.

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52 R-43 S-42	H	4							X				OK		E	New. Reference check OK. Question reviewed in detail. (1) The question appears to require the recall of knowledge too specific for a closed reference test (i.e. valve lineup for a support system). (2) This question is difficult. NO CHANGES MADE. (1) LICENSEE INDICATED THAT WITH THE SYSTEM FLOW DIAGRAM PROVIDED AS A REFERENCE DURING THE EXAM, THE APPLICANTS SHOULD BE ABLE TO CORRECTLY ANSWER THE QUESTION. (2) THE LICENSEE AGREED IT WAS A DIFFICULT QUESTION.
53 S-43	F	3											OK	Y	S	Bank. Reference check OK. Question reviewed in detail.
54 R-44	H	3											OK		S	Bank. Reference check OK. Question reviewed in detail.
55 R-45 S-44	H	3											OK		E	Modified. Reference check OK. Question reviewed in detail. In stem, recommend replacing ... is an INITIAL response.... with ... is the INITIAL response... ENHANCED AS RECOMMENDED.
56 R-46	F	4											OK		S	Bank. Reference check OK. Question reviewed in detail.
57 S-45	H	4				X							OK	Y	E	New. Reference check OK. Question reviewed in detail. Based on the reference provided to the Applicant to answer the question, distractor D does not seem credible. No mention of MSIVs in TS 3.4. NO CHANGES MADE. THE LICENSEE INDICATED THAT WHILE MSIVs WERE NOT SPECIFICALLY COVERED BY TS 3.4, THE MSIVs ARE REQUIRED TO BE OPERABLE AS PART OF THE STEAM ISOLATION SIGNAL (TS 3.5 - INSTRUMENTATION). THAT MAKES DISTRACTOR D CREDIBLE.
58 R-47 S-46	F	4											OK		S	New. Reference check OK. Question reviewed in detail.
59 R-48 S-47	H	4	✖										OK		E	Bank. Reference check OK. Question reviewed in detail. The stem asks for expected system response and the distractors are system response AND the use of procedures). Recommend revising stem to elicit procedure usage part of response. ENHANCED AS RECOMMENDED. ADDITIONALLY, REVISED ALL FOUR DISTRACTORS TO READ LIKE THE STEM.
60 S-48	F	3											OK	Y	S	New. Reference check OK. Question reviewed in detail.
61 R-49	F	3											OK		S	New. Reference check OK. Question reviewed in detail.

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62 R-50 S-49	H	3											OK		E	Bank. Reference check OK. Question reviewed in detail. In stem, recommend CAPITALIZING THE WORD ...TRIPPED... ENHANCED AS RECOMMENDED.
63 R-51 S-50	F	2											OK		S	Bank. Reference check OK. Question reviewed in detail.
64 R-52 S-51	H	3											OK		E	New. Reference check OK. Question reviewed in detail. (1) In the stem, recommend adding "Assume no operator action." after the sentence ... "What is the response of the AFW System?" (2) Does it make a difference in the answer that U-1 is at 5% and U-2 at 100%? (1) ENHANCED AS RECOMMENDED. (2) NO CHANGES MADE.
65 R-53	H	4											OK		E	New. Reference check OK. Question reviewed in detail. (1) Memory level. Only need to recall power supply to correctly answer question. Licensee indicated Higher. (2) The K/A tests power supplies and the distractors have information related to the low & low-low level alarms. This information seems to add an artificial degree of difficulty. In distractors, recommend removing references to the low & low-low level alarms. Only have fuel oil pumps. (3) In distractor D, correct spelling of NIETHER. (1) & (2) NO CHANGES MADE. (3) SPELLING CORRECTED.
66 R-54 S-52	H	2	X										OK		E	Bank. Reference check OK. Question reviewed in detail. Stems asks about exceeding machine ratings and the distractors (& basis for answers) discuss engine run times prior to an overhaul. Recommend revising stem to indicate the overhaul of the engine. NO CHANGES MADE. LICENSEE INDICATED QUESTION WAS CLEAR.
67 R-55 S-53	F	3						X	X				OK		E	New. Question reviewed in detail. (1) Reference provided does not support correct answer. Specifically, there was no procedure stating that the release should be stopped and the tank placed back on recirc. (2) Unsure if this is appropriate question for RO. (3) The question appears to require the recall of knowledge too specific for a closed reference test (i.e. number of hours required to recirc a tank prior to sampling and discharging). NO CHANGES MADE. (1) LICENSEE AGREED THERE WAS NO SPECIFIC GUIDANCE. HOWEVER, THE LICENSEE INDICATED THAT SINCE THE SAMPLE WAS NOT REPRESENTATIVE OF THE TANK CONTENTS (& THEREFORE TANK ACTIVITY WAS UNKNOWN), IT SHOULD BE TREATED THE SAME AS AN INDICATION OF HIGHER THAN EXPECTED RADIATION LEVELS DURING A RELEASE. THERE IS PROCEDURAL GUIDANCE TO STOP THE RELEASE IF RAD LEVELS ARE HIGHER THAN EXPECTED. (2) & (3) LICENSEE INDICATED THIS IS EXPECTED KNOWLEDGE.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
68 R-56 S-54	F	2											OK		S	Bank. Reference check OK. Question reviewed in detail.
69 R-57 S-55	F	3											OK		S	New. Reference check OK. Question reviewed in detail.
70 R-58 S-56	F	4											OK		S	Bank. Reference check OK. Question reviewed in detail.
71 R-59 S-57	H	3											OK		E	Bank. Reference check OK. Question reviewed in detail. In stem, recommend adding a statement to the effect that no operator action was taken related to the blown fuse. NO CHANGES MADE.
72 R-60	F	3											OK		S	New. Reference check OK. Question reviewed in detail.
73 R-61	H	3											OK		S	New. Reference check OK. Question reviewed in detail.
74 R-62	H	3							X				OK		E	New. Reference check OK. Question reviewed in detail. The question appears to require the recall of knowledge too specific for a closed reference test (i.e. summer vs winter cooling valve lineup). NO CHANGES MADE. LICENSEE INDICATED EXPECTED LEVEL OF KNOWLEDGE.
75 R-63	H	3											NO OK		U S	New. Reference check OK. Question reviewed in detail. Unsure how question matches K/A. K/A asks for design features and/or interlocks which provide for cross-connection w/ instrument air. The question asks response of IA system on low system pressure. MODIFIED QUESTION STEM & DISTRACTORS. REFERENCE CHECK OK. QUESTION REVIEWED IN DETAIL. NOTE THAT WHILE THE FACILITY HAS THE ABILITY TO CROSS CONNECT THE TWO SYSTEMS, THE FACILITY DOES NOT NORMALLY OPERATE WITH THE IA & SA CROSS-CONNECTED. HIGHER LEVEL. LOD = 3.
76 R-64	F	2											OK		S	New. Reference check OK. Question reviewed in detail.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
77 S-58	H	3											OK	Y	E	New. Reference check OK. Question reviewed in detail. In stem, recommend changing the way the value of delta I is presented. The control room operator does not have delta I directly indicated in the control room. Recommend providing the information using the same indications and/or values as the operator would have in the control room. NO CHANGES MADE. THE LICENSEE INDICATED THAT THE SRO WOULD BE PRESENTED WITH A DELTA-I VALVE (WHICH WAS COMPUTED BY AN RO.
78 R-65 S-59	H	4											OK		S	Bank. Reference check OK. Question reviewed in detail.
79A S-60	F	2											OK	Y	S	Bank. Reference check OK. Question reviewed in detail.
79B R-66	H	3											OK		E	Bank. Question reviewed in detail. The reference provided does not support the correct answer. Licensee verbally indicated that the operators were expected to know that TS (specifically PZR spray delta T limits) do not apply during the use of EOPs). Licensee will provide reference (i.e., conduct of ops, lesson plan, or other) to support position. LICENSEE PROVIDED OPERATIONS MANUAL USAGE RELATED TO EOPs.
80 R-67 S-61	F	2											OK		S	Bank. Reference check OK. Question reviewed in detail.
81 R-68	H	3						✖	✖				OK		U S	New. Reference check OK. Question reviewed in detail. (1) Unsure if this is appropriate question for RO. Use of EOPs and directing transitions to other procedures is SRO responsibility. (2) The question appears to require the recall of knowledge too specific for a closed reference test (i.e. recall from memory the conditions that require and entry into FR-C.2). K/A REPLACED - JUSTIFICATION WAS UNABLE TO DEVELOP AN OPERATIONALLY VALID QUESTION AT THE RO LEVEL FOR THE ORIGINAL K/A (008-2.4.8). NEW K/A (008-AK2.01) SELECTED USING SYSTEMATIC & RANDOM METHODOLOGY. NEW QUESTION. REFERENCE CHECK OK. QUESTION REVIEWED IN DETAIL. MODIFIED STEM TO BETTER MATCH REFERENCE MATERIAL. HIGHER LEVEL. LOD = 3.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
82 R-69 S-62	F	3	X										OK		E	Bank. Reference check OK. Question reviewed in detail. (1) In stem, recommend stating that the 11 SI pump auto started on the SI signal. Since the stem states CC to the 11 SI pump was isolated, the Applicant may assume the pump was taken out of service (pull-to-lock). (2) In last sentence of stem, recommend changing "preferred" to "required." By using the word "preferred," an Applicant may assume there is more than one correct answer. (1) ENHANCED AS RECOMMENDED. (2) NO CHANGES MADE. LICENSEE INDICATED THE WORD "PREFERRED" WAS CONSISTENT WITH THE LANGUAGE IN THE AOP FOR LOSS OF COMPONENT COOLING.
83 R-70 S-63	H	4											OK		S	New. Question reviewed in detail. References provided initially not support correct answer. Additional reference materials provided to support correct answer.
84 S-64	F	3											OK	Y	E	New. Reference check OK. Question reviewed in detail. In stem, recommend moving the sentence related to the crew being in the fill and vent procedure to the top of the list of conditions. ENHANCED AS RECOMMENDED.
85 R-71 S-65	H	2							X				OK		E	Modified. Reference check OK. Question reviewed in detail. The question appears to require the recall of knowledge too specific for a closed reference test (i.e. knowledge of supplementary actions to trip a RCP in the AOP for loss of RCP seal cooling). NO CHANGES MADE. LICENSEE INDICATED THIS WAS EXPECTED KNOWLEDGE.
86 R-72	H	3						X					OK		E	New. Reference check OK. Question reviewed in detail. Unsure if this is appropriate question for RO. Use of EOPs and directing transitions to other procedures is SRO responsibility. NO CHANGES MADE. LICENSEE INDICATED THIS WAS EXPECTED KNOWLEDGE.
87 R-73 S-66	H	4											OK		E	New. Reference check OK. Question reviewed in detail. Recommend adding a note to the question that Figure C1-10A is provided. ENHANCED AS RECOMMENDED.
88 S-67	H	3											OK	Y	S	New. Reference check OK. Question reviewed in detail.
89 R-74 S-68	F	2											OK		S	Bank. Reference check OK. Question reviewed in detail.
90 R-75	H	3											OK		S	Bank. Question reviewed in detail. Reference provided does not support the basis for the correct answer.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
91 R-76 S-69	F	2											OK		S	Modified. Reference check OK. Question reviewed in detail.
92 R-77 S-70	F H	4 3											<del>NO</del> OK		U S	New. Reference check OK. Question reviewed in detail. Unsure how question matches K/A. The K/A is for knowledge of the reasons for the guidance for loss of IR NIs and the question asks what actions are to be taken for a loss of IR NIs. QUESTION STEM & DISTRACTORS SIGNIFICANTLY MODIFIED TO MATCH K/A. REFERENCE CHECK OK, QUESTION REVIEWED IN DETAIL. HIGHER LEVEL. LOD = 3.
93 S-71	F	3							*				OK	Y	U S	New. Reference check OK. Question reviewed in detail. The question appears to require the recall of knowledge too specific for a closed reference test (i.e. recall from memory the radiation levels required in containment for an Alert classification during a fuel handling accident). K/A REPLACED - JUSTIFICATION WAS UNABLE TO DEVELOP AN OPERATIONALLY VALID QUESTION AT THE SRO LEVEL FOR THE ORIGINAL K/A (036-AA2.03). NEW K/A (056-2.1.32) SELECTED USING SYSTEMATIC & RANDOM METHODOLOGY. NEW QUESTION. REFERENCE CHECK OK. QUESTION REVIEWED IN DETAIL. FUNDAMENTAL LEVEL. LOD = 3. Q = K/A.
94 S-72	H	3						*					<del>NO</del> OK	Y	U S	New. Reference check OK. Question reviewed in detail. (1) Unsure how question matches K/A. The K/A is for knowledge of how event based EOPs/AOPs are used in conjunction w/ symptom based EOPs and the question asks for PZR Level System response to a malfunction of a charging pump speed sensor. (2) Unsure how this is an SRO-only level question. To answer the question, it appears that detailed system knowledge is required. However, RO Applicants are expected to have that level of knowledge. QUESTION REPLACED W/ NEW QUESTION. REFERENCE CHECK OK. QUESTION REVIEWED IN DETAIL. MINOR MODIFICATION TO DISTRACTOR C (CORRECT ANSWER) & DISTRACTOR D TO CLEARLY MAKE "C" CORRECT AND "D" INCORRECT. HIGHER LEVEL. LOD = 3.
95 S-73	F	3											OK	Y	S	New. Reference check OK. Question reviewed in detail.
96 R-78 S-74	H	3											OK		S	New. Reference check OK. Question reviewed in detail.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
97 S-75	H	4											OK	Y	E	Modified. Reference check OK. Question reviewed in detail. (1) Does not appear to be a modified question as defined by NUREG-1021. NUREG-1021 requires that at least one pertinent condition in the stem be changed from the root question. The stem of this question is identical to the stem of the root question. (2) The stem states that power cannot be restored for four days. Operators would not know this, they would only know that buses 11 and 12 were out "indefinitely." Recommend deleting this from the stem and modifying the answer to delete "...AND cooldown the RCS to 340 deg. F. (1) LICENSEE CONSIDERED THE QUESTION TO BE "MODIFIED." LICENSEE'S JUSTIFICATION WAS THE DISTRACTORS WERE ALL CHANGED AND THE QUESTION IS SIGNIFICANTLY DIFFERENT FROM THE ORIGINAL QUESTION ASKED AT ANOTHER FACILITY ON AN NRC EXAM. (2) LICENSEE INDICATED THAT OPERATIONS WOULD HAVE AN ESTIMATE FOR THE OUT OF SERVICE TIME. LICENSEE DID MODIFY DISTRACTOR "D" (THE CORRECT ANSWER) TO READ ... <u>AND</u> cooldown the RCS to 340 deg F.
98 R-79 S-76	F	2											OK		S	Bank. Reference check OK. Question reviewed in detail.
99 R-80	F	2											OK		E	Modified. Reference check OK. Question reviewed in detail. Does not appear to be a modified question as defined by NUREG-1021. NUREG-1021 requires that at least one pertinent condition in the stem be changed from the root question. The stem of this question is almost identical to the stem of the root question. NO CHANGES MADE. LICENSEE INDICATED THAT THE QUESTION WAS SIGNIFICANTLY MODIFIED.
100 S-77	F	3											OK	Y	S	Modified. Reference check OK. Question reviewed in detail.
101 R-81 S-78	F	3					*						OK		U S	Bank. Reference check OK. Question reviewed in detail. Appears to be 2 correct answers. Distractor B also appears to be correct. As discussed in the basis document for ECA-0.0, resetting the SI signal also permits the operator to manually load SI equipment as instructed in the recovery procedures. DISTRACTOR "B" REPLACED.
102 R-82	F	2											OK		E	New . Reference check OK. Question reviewed in detail. Recommend modifying the fifth bullet in the stem to read "...Bus 26 be restored to its <u>alternate</u> offsite power source."ENHANCED A S RECOMMENDED.
103 S-79	F	3											OK	Y	S	Bank. References provided initially not support correct answer. Additional reference materials provided to support correct answer. Question reviewed in detail.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
104 S-80	F	3											OK	Y	S	Bank. Reference check OK. Question reviewed in detail.
105 R-83 S-81	F	2											OK		E	Bank. Reference check OK. Question reviewed in detail. Recommend modifying the stem to read "...monitors could STOP a radioactive waste discharge if a HIGH alarm condition exists?" ENHANCED AS RECOMMENDED.
106 R-84 S-82	H	2					X						OK		E	New . Question reviewed in detail. (1) If the Applicant assumes the tank is clean or below any rad monitor setpoints, then no radiation monitor will be affected once the relief lifts. Therefore, there would be no correct answer. The stem appears to be missing a statement concerning the radiological conditions within the tank. (2) The reference provided does not support the correct answer. Specifically, need a drawing for U-2 Shield Building Vent System. (1) NO CHANGES MADE. LICENSEE INDICATED THAT SINCE THE TANK WAS IN SERVICE, IT WOULD BE ALIGNED TO THE LOW PRESSURE HEADER RECEIVING GASEOUS WASTES. (2) REFERENCE ADDED.
107 R-85 S-83	H	3				X							OK		E	New . Reference check OK. Question reviewed in detail. Distractor B does not appear credible. The question asks what occurs if .... and distractor B describes a TS limitation. NO CHANGES MADE. WHILE THE LICENSEE AGREED THAT DISTRACTOR B WAS A LIMITATION RATHER THAN A DIRECT ACTION, THE LICENSEE INDICATED IT WAS AN ACTION THAT MUST BE CONSIDERED.
108 S-84	F	3					✖						OK	Y	U S	New . Reference check OK. Question reviewed in detail. (1) Distractor A appears to be another correct answer. As discussed in basis document for Tech Spec 3.8, one RHR pump is required to be run to ensure consistent concentration of boron, minimizing the effects of an inadvertent dilution. (2) Recommend modifying the first bullet of the stem to read "The UNIT is in refueling operations (fuel movements)." QUESTION REPLACED. NEW QUESTION. REFERENCE CHECK OK. QUESTION REVIEWED IN DETAIL. Q=K/A. FUNDAMENTAL LEVEL, LOD=3, SRO ONLY.
109 S-85	F	2											OK	Y	S	Bank . References provided initially not support correct answer. Additional reference materials provided to support correct answer. Question reviewed in detail.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
110 R-86	F	2	*										NO OK		U S	Bank. Reference check OK. Question reviewed in detail. (1) Unsure how question matches K/A. The K/A addresses a plant fire and the ability to perform system and integrated procedures. The question, as written, tests the applicant's knowledge of FP system but does not test their ability to perform plant procedures. (2) NOTE: The stem describes what appears to be an inadequate work control boundary, in that, taking the pump 121 switch to PULLOUT does not preclude its automatically starting upon low header pressure. It appears that work should not have been performed on the system without first tripping the power supply breaker for pump 121. QUESTION REPLACED. NEW QUESTION. REFERENCE CHECK OK. QUESTION REVIEWED IN DETAIL. FUNDAMENTAL LEVEL, LOD=2.
111 R-87 S-86	F H	3											OK		U S	New. Question reviewed in detail. Based on the reference provided, there does not appear to be a correct answer. The question asks "why are BOTH feedwater pumps and all but one condensate pump tripped?" Distractor A does not include the basis for tripping the feedwater pumps or the condensate pumps. Distractor A is the basis for verifying that a condensate system pump recirculation control valve is open. UNABLE TO WRITE AN OPERATIONALLY VALID QUESTION FOR PREVIOUS K/A (068 - AK3.08) AND SUPPORT CORRECT ANSWER WITH A REFERENCE. NEW K/A (040 - AK3.03) SYSTEMATICALLY AND RANDOMLY SELECTED. NEW QUESTION. REFERENCE CHECK OK. REVIEWED IN DETAIL. HIGHER LEVEL, LOD=3, Q=K/A.
112 R-88 S-87	H	2											OK		S	New. Reference check OK. Question reviewed in detail.
113 R-89 S-88	F	3		X									OK		E	Bank. Question reviewed in detail. References provided initially not support correct answer. Additional reference materials provided to support correct answer. The distractors discuss repeating 1FR-Z.1. Only Distractor B (the correct answer), discusses not repeating 1FR-Z.1. This could cue the applicant to selecting the correct answer. NOTE - previously accepted question - 1998 DC Cook exam. NO CHANGES MADE. LICENSEE INDICATED ALL DISTRACTORS MUST BE CONSIDERED.
114 R-90 S-89	H	2											OK		E	New. Reference check OK. Question reviewed in detail. Distractors C & D seem confusing. Using the information in the basis for answers for Distractor A, the signal is reset only as long as the reset push buttons are depressed. However, using the information in the basis for answers for Distractors C and D being incorrect, the SI signal is not considered reset if the reset is in only so long as the reset pushbuttons are depressed (not sealed in). LICENSEE CHANGED THE BASIS FOR DISTRACTOR D BEING INCORRECT. ALSO CHANGED <u>WILL NOT</u> IN DISTRACTOR C & D TO <u>will NOT</u> .

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
115 S-90	H	3	X						X				OK	Y	E	New. Reference check OK. Question reviewed in detail. (1) The question appears to require the recall of knowledge too specific for a closed reference test (i.e., knowledge of system lineups in an EOP recovery procedure. (2) Unsure if operators would be using Tave for the given conditions. Procedure 1ES-1.1 does not mention Tave. NO CHANGES MADE. (1) EXPECTED KNOWLEDGE. (2) THE VALVE OF 200 DEG. F WAS PROVIDED AS A REFERENCE POINT TO CLEARLY DEFINE WHAT WAS MEANT BY ..." the action s of 1ES-1.1are complete."
116 S-91	H	3					X						OK	Y	E	New. Reference check OK. Question reviewed in detail. Distractor D may be too close to a possible correct answer. Although no PAGs may need to be specified, the emergency director will still "determine" that no PAGs are required. NO CHANGES MADE. THE LICENSEE INDICATED THAT THE CONDITIONS IN THE STEM DO NOT REQUIRE PAGs.
117 R-91 S-92	H	4					*						OK		U S	New. Reference check OK. Question reviewed in detail. (1) Appears to be 2 correct answers (distractor C also appears to be correct). As stated in the stem, with no operator action, a SGTR will begin filling the SG with RCS water. The SGBD system will not isolate until an SI signal is generated (probably on low pressurizer pressure). Pressurizer pressure will take some finite amount of time to decrease to the SI setpoint. During that time, there is a LOCA pathway to the auxiliary building via the SGTR, the SGBD system, and the ruptured flash tank. (2) EDITORIAL - In basis for answers, C & D appear to be reversed. REVISED STEM TO ADD "AFTER SI ACTUATION OCCURS," AND REVISED DISTRACTOR ""C" TO MAKE THE DISTRACTOR MORE PLAUSIBLE WITH STEM. QUESTION REVIEWED IN DETAIL. HIGHER LEVEL. LOD = 4.
118 R-92 S-93	H	4	X										OK		E	New. Reference check OK. Question reviewed in detail. Based on the conditions in the stem, distractor B is not completely correct. The stem of the question asks "which of the following must be performed to ISOLATE the leak." In order to isolate the leak, the RWST will also have to be isolated from the flange. Otherwise, the standing head from the RWST will cause the leak to continue. (The consequences would not be as severe due to RWST water verses RCS water and lower leak rate due to lower driving head). ADDED RHR HX OUTLET CONTROL VALVES TO DISTRACTORS A & B TO ISOLATE THE RWST FROM THE LEAK.
119 R-93 S-94	F	3											OK		S	New. Reference check OK. Question reviewed in detail.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
120 R-94 S-95	F	3											OK		E	New. Reference check OK. Question reviewed in detail. In stem, recommend modifying last sentence to read...What is the basis for verifying the value of the RVLIS Dynamic Head indication? ENHANCED AS RECOMMENDED.
121 R-95	H	4											OK		S	Modified. Reference check OK. Question reviewed in detail.
122 R-96 S-96	H	3											OK		E	New. Reference check OK. Question reviewed in detail. In stem, recommend adding the current sub-cooling margin. This information would be available to an operator in the control room and it may influence the decision an starting a RCP. ENHANCED AS RECOMMENDED.
123 R-97 S-97	H	2											OK		S	New. Reference check OK. Question reviewed in detail.
124 R-98 S-98	F	2	X										OK		E	Bank. Reference check OK. Question reviewed in detail. In stem, recommend deleting the word "final." The question asks for the "final" AFW flow that will be established. Initially, AFW flow will be set at 40 gpm since the RCS cooldown rate is > 100°F/hr. Once the cooldown rate is <100°F/hr, AFW flow may very well be increased to 200 gpm in order to restore SG levels to > 50% WR (IAW the caution statement of ECA-2.1, Step 2). ENHANCED AS RECOMMENDED.
125 R-99 S-99	F	3											OK		S	New. Reference check OK. Question reviewed in detail.
126 R100 S100	F	2											OK		E	Bank. Reference check OK. Question reviewed in detail. In stem, recommend revising radiation levels for 0838 to below the adverse containment value. This would make Distractor D more probable if the Applicant does not understand that an engineering evaluation is needed after high rad in containment. NO CHANGES MADE.

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Admin, Simulator, and In-plant JPMs

General Comments

- On Applicants turnover sheet, recommend removing the page numbers. The length of the JPM may give the Applicant some hint if this is an alternate path JPM.
- Independent Verification & Peer Review - Recommend revising the evaluator's cue to state that the Independent Verification and/or Peer Review has been completed.

RO-A.1.a	<p><u>Verify Safeguard Component Alignment in the Control Room Following SI.</u></p> <ul style="list-style-type: none"> <li>• Early review.</li> <li>• On JPM pg. 4/12, add Window 44103: A8 to list for SI Active Status lights not lit. This Window is for the 11 containment spray pump which was out of service in initial conditions.</li> <li>• On JPM pg. 7/12, add that the order the exceptions are identified is not critical in subsequent steps.</li> <li>• Closing CV-31339, "Letdown Line Containment Isolation," is not critical because another containment isolation valve in the line is already closed.</li> <li>• Add valve CV-31546, "RCDT Gas Analyzer Header Isolation," to step with CV-31545. Revise critical step to close one or the other.</li> </ul>
RO-A.1.b	<p><u>Determine TS Operability of Equipment During Performance of Surveillance Procedure.</u></p> <ul style="list-style-type: none"> <li>• Early review.</li> <li>• Recommend revising initiating cue. Remove the 10 - 15 minutes. This may lead the Applicant to believe that he/she <u>must</u> spend 10 - 15 minutes reviewing the procedure.</li> <li>• Increase time to completion to 30 minutes.</li> </ul>
RO-A.2	<p><u>Prepare an Isolation for a Leaking Heat Exchanger.</u></p> <ul style="list-style-type: none"> <li>• Increase time to completion to 25 minutes.</li> <li>• Revise initiating cue for the SS directs the Applicant to identify the valves and position needed to isolate the 11 letdown Heat Exchanger.</li> <li>• Remove the second bullet in Initiating Cue.</li> <li>• Revise the table by removing the normal status and card number columns.</li> <li>• For Examiners copy, list all of the valves and identity which are critical.</li> <li>• In JPM steps, list all of the valves.</li> </ul>

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RO-A.3	<p><u>Prepare for an Emergency Containment Entry.</u></p> <ul style="list-style-type: none"> <li>• Revise initial conditions: (1) change R-11 &amp; R-12 are alarming on scale to provide a value. Also provide a picture of R-11 &amp; R-12 meters in control room that has the value on it. This lets the Applicant know if the reading is “on scale.” If the reading is “on scale” the respiratory protection requirements are different (another critical task).</li> <li>• In initiating cue, remove “emergency” from containment entry. The Applicant must use initial conditions to determine that an emergency entry is required.</li> <li>• Provide an RWP for review.</li> <li>• For step 9.2.7 (containment temperature), recommend adding an evaluator’s cue that ...”If asked, containment temperature is 83 degrees...”</li> <li>• Add Air locks unlocked (personnel safety) as a critical task.</li> <li>• Change time to completion to 20 minutes.</li> <li>• For step 9.2.3, add Evaluator Cue when asked, inform the Applicant that there is no flux mapping in progress, the shield building vent systems are secured, and personnel and maintenance air locks are unlocked.</li> </ul>
RO-A.4	<p><u>Determine Impact of Fire Outside of the Control Room.</u></p> <ul style="list-style-type: none"> <li>• Change JPM to in-plant, simulate performance. This will make a better evaluation tool.</li> <li>• Increase time to completion to 30 minutes (the breakers are in several different areas in the Aux and Turb Bldg.).</li> <li>• In Initial Conditions, add Fire Area 59.</li> <li>• Add title for alarm window C47022-0611 and a copy of the ARP to provide to the Applicant (if asked).</li> <li>• In initiating cue, the Applicant is to simulate taking the actions in F5 Appendix D.</li> <li>• Add Evaluator’s Note that the order of steps outside of the control room is not critical.</li> <li>• Add Evaluator’s Note that the Applicant does not need to enter the control room to simulate Rx trip and MSIVs being closed. This is adequately evaluated in scenarios.</li> <li>• Add locations of MCCs and DC panels in Evaluator’s Notes.</li> <li>• Add cue about not needing SCBAs to enter the Aux Building. (Note that the fire is near the location of the MCCs.)</li> <li>• Add Evaluator Cue for DC panels that light for the breaker is OFF.</li> </ul>

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SRO-A.1.a	<p><u>Evaluate Shift Staffing Options.</u></p> <ul style="list-style-type: none"> <li>• Revised Initial conditions so there are only 4 operators vice 5. This way there is only one correct answer.</li> <li>• Recommend revising Time for Completion to 30 minutes.</li> <li>• Recommend revising initiating cue to state 5AWI 3.15.0. The SRO Applicant should know the section from memory.</li> <li>• Recommend revising initiating cue to state that the Applicant is to evaluate each option and determine which option will prevent exceeding the NRC work hour guidelines (critical). Provide the basis for your selection(s) (non-critical).</li> <li>• Recommend revising Task Standard to state that task is satisfied by determining Operator # 3 (Jim Jones) can fill the shift without exceeding plant work hour restrictions.</li> <li>• Recommend revising Terminating cue state identifying option 3 satisfies the critical criteria.</li> <li>• In Performance Step 1, recommend adding Evaluator's Cue that if asked, no work hour restriction deviations will be granted.</li> </ul>
SRO-A-1.b	<p><u>Determine the Operability of Equipment during Surveillance Procedure Review.</u></p> <ul style="list-style-type: none"> <li>• Revise Initiating Cue by removing "report your results to your examiner.</li> <li>• Revise errors in procedure: (1) step 7.3.14 add initials; (2) step 7.3.15, circled yes; (3) on Figure 1, no point is plotted. The Applicant must determine that the data is outside of the acceptable range and plot the point, and correct the step.</li> <li>• Add Evaluator Cue that if asked, the Applicant is to plot the point on Figure 1. This becomes a critical step.</li> <li>• Step 7.3.30, delete critical step. In Initial Conditions, the Applicant was not asked to identify inoperable components. Procedure does not have reviewer declare the valve inoperable.</li> <li>• Recommend adding initials to cover page of procedure SP 1155 for Independent Verifier (L.O.) and other operator (R.O.).</li> <li>• Recommend changing time to completion to 30 minutes.</li> </ul>

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SRO-A.2	<p><u>Conduct a Shutdown Safety Assessment.</u></p> <ul style="list-style-type: none"> <li>• Increase time to completion to 30 minutes.</li> <li>• In initial conditions, first bullet, delete “cold shutdown.”</li> <li>• For step for Bus 15 Sequencer, add alarm panel and window to C.R. sequencer alarms (47024, 1001 (not lit)). JPM pg 7/22.</li> <li>• For step for Bus 16 Sequencer, add alarm panel and window to C.R. sequencer alarms (47024, 1004 (not lit)). JPM pg 7/22.</li> <li>• For step for Bus 15 &amp; 16 sequencer, in Evaluator’ Note, add bullet indicating that as soon as the Applicant identifies a “NO” for Bus 15 Sequencer, additional checks for Bus 15 Sequencer not needed. Same for Bus 16 Sequencer. JPM pg 7/22.</li> <li>• In step for Red Inverter Backed Instrument Bus available (JPM pg. 11/22), add Evaluator’s note that once the Applicant gets a “NO,” there is no need to continue.</li> <li>• In step for Blue Inverter Backed Instrument Bus available (JPM pg. 12/22), add Evaluator’s note that once the Applicant gets a “NO,” there is no need to continue.</li> <li>• In step for Yellow Inverter Backed Instrument Bus available (JPM pg. 13/22), add Evaluator’s note that once the Applicant gets a “NO,” there is no need to continue.</li> <li>• On page 18 of 22 for the step to “Determine Shutdown Safety Conditions,” revise the Standard to add the numerical values.</li> <li>• On page 18 of 22 for the step to “Determine Shutdown Safety Conditions,” revise the Evaluator’s Note to require circling both the Yellow and Orange conditions. This is consistent with the Task Standard.</li> </ul>
SRO-A.3	<p><u>Approved Release of Liquid Radioactive Waste Tank.</u></p> <ul style="list-style-type: none"> <li>• Early review.</li> <li>• Recommend revising the initiating cues. In the second bullet recommend stating that “You are to review and if appropriate, approve the release ...” In the third bullet, recommend stating “Verbalize any discrepancies ..”</li> <li>• In Performance Step 2, recommend revising Evaluator’s cue to have Evaluator provide Applicant a signed cover sheet if the Applicant identifies the missing signature.</li> <li>• In Performance Step 6, Test of R-18 (Procedure step 5.4), recommend revising Evaluator’s cue so when Applicant directs RO to perform test of R-18, the Evaluator will give Applicant the completed step from the procedure.</li> <li>• Recommend changing time to completion to 15 minutes.</li> </ul>
SRO-A.4	<p><u>Classify Event and Initiate PARS for a General Emergency.</u></p> <ul style="list-style-type: none"> <li>• Early review.</li> <li>• Revise time to completion to 20 minutes.</li> <li>• Provide Applicant with entire copy of procedure PINGP 1125 to avoid inadvertently cuing that the classification of the event is a General Emergency.</li> </ul>

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B.1.a	<p><u>Isolate a Ruptured S/G.</u></p> <ul style="list-style-type: none"> <li>• Early review.</li> <li>• On JPM cover sheet, recommend adding this has an alternate path.</li> <li>• Revise time for completion to 20 minutes.</li> <li>• E-3 step 3.e, RNO, recommend revising range to + - 1% vice + - 2%.</li> <li>• E-3. Attachment B, step 5, recommend adding Evaluator Note that the critical portion is valves MV-32327 and 32355 are closed. It is not critical that MV-32327 &amp; -32355 are closed after CY-1-1, CY-1-4, ect.. are closed. The sequence is not critical.</li> <li>• E-3. Attachment B, step 11 is not critical (verify only). Also revise standard to verify closed.</li> <li>• Recommend revising Evaluator's cue for E-3, Attachment B, step 12 to read: If asked as SS, respond to the Applicant "No we are not going to transfer gland steam to heating steam right now."</li> </ul>
B.1.b (SRO-U)	<p><u>Contingency Actions for a Loss of All AC Power w/ RCS Level 1 foot Below the Reactor Vessel Flange.</u></p> <ul style="list-style-type: none"> <li>• Increase time for completion to 15 minutes.</li> <li>• In Initial conditions, add how long the plant has been shutdown and the time to boil.</li> <li>• In initial conditions, recommend deleting ECA-0.0 has been implemented. Also recommend revising initiating conditions to state that applicable steps of ECA-0.0 have been implemented.</li> <li>• In 1E-4, Attachment I, Step 3, recommend specifying the exact exceptions for the containment isolation monitor lights.</li> <li>• In step to evacuate containment, recommend adding Evaluator Cue to have Applicant demonstrate containment evacuation.</li> </ul>
B.1.c	<p><u>Perform Control Rod Exercise Surveillance.</u></p> <ul style="list-style-type: none"> <li>• Increase time to completion to 20 minutes.</li> <li>• Ensure Applicant and individual who operates the disconnect switches both have radios (for communication).</li> <li>• For step to record Group Position &amp; RPI, add Evaluator Cue: If asked, inform the Applicant to only record information associated with rod E-3. (JPM pg 5/12)</li> <li>• For step to insert control rod 12 + - 1 step, add Evaluator Note that Computer Alarm/Rod Deviation Sequence annunciator (47013, 0507) will alarm. (JPM pg 6/12)</li> <li>• Step 7.2.13 of surveillance, "verify RPI, Tave, etc..." is not critical because it is only verify. (JPM pg 9/12)</li> <li>• Revise terminating cue. When the Applicant has completed the reset of the Urgent Failure alarm, inform the Applicant that another operator will complete the procedure.</li> </ul>

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<p>B.1.d (SRO-U)</p>	<p><u>Transfer SI to Recirc Mode w/ Failure of One Safeguards Train.</u></p> <ul style="list-style-type: none"> <li>• On JPM cover sheet, recommend adding this has an alternate path.</li> <li>• Revise time to completion to 30 minutes.</li> <li>• In initial conditions, recommend removing the reference to RWST level. The transition to ES-1.2 is based on RWST level.</li> <li>• ES-1.2 step 4, revise Standard by deleting "... by asking Shift Supervisor." This does not match wording in ES-1.2.</li> <li>• ES-1.2, step 5, revise Standard to state: "Containment Spray has not actuated therefore is not necessary to reset CS signal."</li> <li>• ES-1.2, step 5, delete Evaluator's Note.</li> <li>• ES-1.2, step 7, Caution, add Evaluator's Note: "One of the initial conditions was Attachment K was previously completed."</li> <li>• ES-1.3, step 3, is not critical. The valves were closed in ES-1.2.</li> <li>• ES-1.3, step 3, revise Evaluator's Note to state: "The valves were closed in ES-1.2."</li> <li>• ES-1.3, step 4, add Evaluator's note that the valve has a long stroke time.</li> <li>• ES-1.3, step 5, revise Standard by changing Opened to Closed.</li> <li>• ES-1.3, step 5, add Evaluator's note that the valve has a long stroke time.</li> <li>• ES-1.3, Step 9, check RCS pressure &lt; 125 psig is not critical because it is only check.</li> </ul>
<p>B.1.e</p>	<p><u>Take Corrective Action for a Power Range NIS Failure - High.</u></p> <ul style="list-style-type: none"> <li>• One Editorial comment - JPM page 6 of 11, Second Performance step, change POWER RANGE DRAWER B TO A.</li> </ul>
<p>B.1.f (SRO-U)</p>	<p><u>Respond to a Loss of Instrument Air.</u></p> <ul style="list-style-type: none"> <li>• On JPM cover sheet, recommend adding this has an alternate path.</li> <li>• REPLACED JPM due to limited opportunities to evaluate the Applicant's performance. There are a lot of verify steps and not many action steps.</li> <li>• REPLACEMENT JPM: Swap air compressors. After successful swap, and shut down of the original air compressor, air leak develops requiring entry into ARP, restarting the compressor that was shutdown, and closing the Station Air Header Isolation valve. It should have auto closed, but failed to close.</li> </ul>
<p>B.1.g</p>	<p><u>Respond to an Abnormal Radiation Level During Waste Gas Release.</u></p> <ul style="list-style-type: none"> <li>• REPLACED JPM due to: (1) limited opportunities to evaluate the Applicant's performance. There are a lot of verify steps and not many action steps. (2) Annunciator Response Procedure 47022-0108 has some steps that do not have verifiable actions.</li> <li>• REPLACEMENT JPM: Perform Test of R-18, "Waste Liquid Release Monitor." The JPM is to conduct the test of radiation monitor R-18 prior to a Waste Gas Release. This will need to be scheduled before the SRO performs Admin JPM A.3.</li> </ul>

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<p>B.2.a</p>	<p><u>Perform U-1 RO Actions During a Control Room.</u></p> <ul style="list-style-type: none"> <li>• Recommend changing completion time to 45 minutes.</li> <li>• On JPM cover sheet, recommend adding this has an alternate path.</li> <li>• On Applicants turnover sheet for the initiating cue, recommend making the <b>BOLD</b> words the same as the examiners sheet.</li> <li>• For the copy of procedure F5, App B, Attachment C, that the examiner gives the Applicant, recommend have steps A - D initialed (or signed).</li> <li>• In step E, Attachment C related to verifying the turbines are tripped, recommend adding evaluator's cue that indications that the turbine is tripped (i.e., tripped lever is positioned to right, auto stop oil pressure is &lt; 45 psig, stop valve position.)</li> <li>• For cue in step G.2 related to admission of air to solenoid, recommend adding hear a rush of air and hear the engine start. Add Evaluator's note that override valve only turns one way. If asked, inform Applicant that engine is at about 1200 rpm, vice the engine is up to full speed.</li> <li>• For step to verify CV-31423 is open, recommend adding evaluator's to cue: valve stem is up, solenoid light is out, air pressure is zero, and Applicant can feel flow through pipe.</li> <li>• For step to place CS-19058 in "ON," recommend adding cues that red light is on, damper opens, hear fan running.</li> <li>• For step to verify 22 DDCLP is running, adding Evaluator cue: engine nosie, shaft turning, pressure gauge 11024 reading about 105 psig.</li> <li>• For Attachment C, step J (check if 122 diesel fire pump running), recommend adding Evaluator's cue that Pressure indicator 11474 is reading zero. Note that for JPM, the 112 pump is not running.</li> <li>• For step verifying CS-19081 is in auto, recommend adding evaluator cue that Green light is lit.</li> <li>• For step to depress and release CS-70394, recommend adding evaluator's note that there is no outward visible sign that anything happened when the reset P/B was depressed.</li> <li>• For step to turn local 5-position switch to MAN-A or MAN-B, recommend adding evaluator's note that there is no outward visible sign other than switch position that anything happened when the switch was moved.</li> </ul>
<p>B.2.b (SRO-U)</p>	<p><u>Establish Containment Integrity After a CFCU Leak in Containment.</u></p> <ul style="list-style-type: none"> <li>• Early review.</li> <li>• In initiating cue, add "You are an extra operator on shift."</li> <li>• Recommend revising time for completion to 20 minutes.</li> <li>• In copy of procedure given to Applicant, N/A the steps not associated with 23 CFCU.</li> <li>• In copy of procedure given to Applicant, sign off substeps A - G.</li> <li>• For first three JPM steps, recommend adding an evaluator's note to state that the order of opening the MCC breakers is not critical.</li> <li>• Editorial comment - In Evaluator's Note for step 2.4.3.J, recommend removing the word "and" from "...between and operator...." and adding "the."</li> </ul>

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B.2.c (SRO-U)	<p><u>Local Shutdown &amp; Return of D6 to Auto Standby.</u></p> <ul style="list-style-type: none"><li>• In initiating cue, add "You are an extra operator on shift."</li><li>• In procedure, N/A steps 5.7.2 .A 1 &amp; 2. Note that this makes first step in JPM go away.</li><li>• For JPM step to shutdown D6 using CS-60069, recommend revising the JPM step to read "CS-60069 placed in Stop" (to match the actual wording on switch). Add Evaluator's Note that the control switch spring returns to the center position.</li><li>• For step 5.7.2.D, verify D6 comes to a stop, revise Evaluator's Cue that after 3 minutes, D6 engine RPM is zero (indicator 60049).</li><li>• Step 5.7.2.G, revise Evaluator's Note to state simulate using the computer. Applicant will not use the computer keyboard. Recommend revising Evaluator's note that if the Applicant states he would use computer to obtain temperature, then cue Applicant that temperature indicates 90 deg. F.</li><li>• Add to terminating cue that another operator will continue the shutdown of D6.</li></ul>
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Simulator Scenarios

General Comments

- In event description block, add event number corresponding to Form ES-D-1. (This makes the lead examiner's life a little easier.)
- Renumber Events as needed.

Scenario One (Early Review)	
Turnover	<ul style="list-style-type: none"> <li>• Recommended added placing a second orifice in service when the crew takes the shift. Two letdown orifice are usually in service at this power. Placing a second orifice in service will give the crew something to do when they take the shift instead of simply holding power and waiting for a fault. This will be Event 1 and be a Normal for the crew.</li> <li>• Recommend changing the tube leak to the "11" S/G. This adds more of a consequence for the uncontrolled depressurization of the "11" S/G during the major event.</li> </ul>
Event 1	<p><u>Place a Second Letdown Orifice in Service.</u> (Crew - N)</p> <ul style="list-style-type: none"> <li>• Recommend adding the significant steps the RO/BOP takes to place a second letdown orifice in service.</li> </ul>
Event 1 Event 2	<p><u>Running Charging Pump trips.</u> (RO-C)</p> <ul style="list-style-type: none"> <li>• The malfunction provides a very limited significant system/plant response and requires minimum operator actions to correct. Additionally, there are very limited opportunities to evaluate the Applicant's performance.</li> <li>• Recommend adding the RO reports malfunction / alarm to SRO, refers to ARP, and carries out applicable actions in ARP (i.e., (1) increase charging pump speed and/or adjusting charging line flow control valve (CV-31198) to restore seal injection 6 -10 gpm and (2) and place pump in auto.</li> <li>• Recommend adding the SRO directs RO to take recovery actions per the ARP.</li> <li>• Recommend adding SRO directs that a letdown orifice be taken out of service to maintain PZR level.</li> <li>• Recommend adding the significant steps to take a letdown orifice out of service.</li> <li>• The Evaluator's Note related to TS is unclear and a bit confusing. Recommend deleting the Note.</li> <li>• Recommend adding an Evaluator's Note that # 12 charging pump <b>MUST BE IN AUTO</b> prior to initiating next event.</li> </ul>

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Scenario One (Early Review)	
Event 2 Event 3 Event 4	<p><u>Blue PZR Level Inst Fails Low (RO - I) and a Containment Isolation Valve Fails to Isolate requiring Alternative Isolation (RO/BOP - C). (LCO action entry).</u></p> <ul style="list-style-type: none"> <li>• Recommend adding the expected annunciators (name &amp; number).</li> <li>• Recommend adding the RO reports malfunction / alarm to SRO, refers to ARP, and carries out applicable actions in ARP.</li> <li>• Recommend adding the RO/BOP reports that letdown orifice valve CV-31326 failed to close.</li> <li>• Recommend adding the SRO refers to Instrument Failure Guide 1C51.3 and directs RO/BOP to carry out applicable actions.</li> <li>• Recommend adding the SRO refers to procedure C12.1, Letdown, Charging, and Seal Water Injection and directs BOP to restore excess letdown per procedure.</li> <li>• Recommend adding the significant steps the BOP takes to place excess letdown in service.</li> <li>• Recommend adding SRO refers to procedure 1C19.1, Containment System Integrity, U-1, for alternate isolation of letdown orifice valve CV-31326 and directs RO/BOP/In-plant operator to perform required actions.</li> <li>• Recommend adding a note that it is not necessary to complete venting the air supply or removing the fuses for CV-31339 prior to moving to the next event.</li> </ul>
Event 3 Event 5	<p><u>EH filter high D/P resulting in 1A &amp; 2A Reheat Intercept Valves Closure, Requiring Controlled Power Change to 50% (RO-R &amp; BOP-N)</u></p> <ul style="list-style-type: none"> <li>• Recommend adding the BOP reports malfunction / alarm to SRO, refers to ARP, and carries out applicable actions in ARP.</li> <li>• Recommend adding the SRO refers to 1C23 AOP2 "MALFUNCTION OF TURBINE EH CONTROL SYSTEM" and directs BOP to carry out applicable actions.</li> <li>• Recommend adding SRO refer to 1C1.4 AOP1, Rapid Power Reduction - Unit 1, and directs RO/BOP reduce power to 50%.</li> </ul>
Event 4 Event 6	<p><u>1B Reheat Intercept Valves fail closed requiring manual Rx Trip. (All - Major)</u></p> <ul style="list-style-type: none"> <li>• Recommend adding BOP recognizes and reports the 1B Reheat Intercept Valves fail closed.</li> <li>• Recommend adding SRO refers to 1C23 AOP2 "MALFUNCTION OF TURBINE EH CONTROL SYSTEM" and directs RO/BOP to trip the reactor and carry out the immediate actions in 1E-0.</li> <li>• Recommend adding SRO refers to 1E-0, Rx Trip or Safety Injection, and directs the actions of the RO/BOP per 1E-0.</li> </ul>
Event 5 Event 7	<p><u>Failure of Turbine to Trip Auto/Manually/Locally (SV-1 Sticks Open), Failure of CV-3 to Close, and Failure of 11 S/G MSIV to Close. Uncontrolled Depressurization of 11 S/G. (All - C)</u></p> <ul style="list-style-type: none"> <li>• Recommend adding BOP recognizes and reports the turbine would not manually trip, CV-3 not manually close, and 11 S/G MSIV not manually close.</li> <li>• Recommend adding Evaluator's Note that 5 minutes after the Rx trip, the 12 S/G faults in containment (ramped over 5 minutes).</li> </ul>

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Scenario One (Early Review)	
Event 6 Event 8	<p><u>TDAFW pump trips on overspeed during startup (will not restart).</u> <u>MDAFW pump fails to auto start, requiring manual start following EOP entry.</u> (BOP - C)</p> <ul style="list-style-type: none"> <li>• Recommend adding BOP recognizes and reports the TDAFW pump tripped during startup and will not restart.</li> <li>• Recommend adding BOP recognizes and reports the MDAFW pump did not start.</li> <li>• Recommends adding SRO directs BOP to manually start MDAFW pump.</li> </ul>
Event 7 Event 9	<p>Faulted 12 S/G in containment.(Uncontrolled Depressurization of both S/Gs). (All-Major)</p> <ul style="list-style-type: none"> <li>• No comments.</li> </ul>

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Scenario Two	
Turnover	<ul style="list-style-type: none"> <li>Recommend changing the tube leak to the "11" S/G for consistency between scenarios.</li> </ul>
Event 1 Event 2	<u>Normal Power Increase (RO - R) &amp; Transfer of Non-Safeguard Busses (BOP- N)</u> <ul style="list-style-type: none"> <li>Recommend adding the significant actions taken by the RO and BOP for the power increase.</li> <li>Recommend adding the circuit breakers operated by the BOP during the transfer of busses.</li> <li>Recommend adding Evaluator Note that Event 3 can be entered after the steam dumps are in Tave control.</li> </ul>
Event 3	<u>12 S/G Blue Pressure Channel Fails High (RO - I)</u> <ul style="list-style-type: none"> <li>Recommend adding a note to ensure the BOP operator is not available to ensure the RO Applicant responds to the event. (This is being done due to the control board location of some of the instrumentation and controls for the S/G PORV).</li> <li>Recommend adding the RO reports malfunction / alarm to SRO, refers to ARP, and carries out applicable actions in ARP.</li> <li>Recommend adding the SRO directs RO to carry out applicable actions.</li> <li>Recommend adding a note that the input to the TPM (thermal power monitor) output is not affected.</li> </ul>
Event 4	<u>RCS to CC Leak in Thermal Barrier Heat Exchanger (All - C)</u> <ul style="list-style-type: none"> <li>Recommend deleting the event. The event was not assigned as a malfunction for a specific Applicant and was not an added complication for the events that followed.</li> </ul>
Event 4	<u>Inadvertent Auto Start of the TDAFWP Followed by a Steam Leak in the Turbine Building Requiring Isolation of the TDAFWP. (BOP - C)</u> <ul style="list-style-type: none"> <li>Recommend adding alarms that occur as a result of the event (i.e., FRV closure).</li> <li>Recommend adding significant steps to stop the TDAFWP.</li> <li>Add an Evaluator's Note that the steam leak is entered after the TDAFWP has been stopped.</li> <li>Recommend adding Evaluator's Note that the U2 SS will be allowed to perform the actions of procedure F-9.</li> <li>Recommend adding an explanation why the plant is in TS 3.0.C (it is not obvious and it is complicated).</li> </ul>

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Scenario Two	
Event 5 Event 6	<p><u>Inadvertent SI with Lockout of Bus 16 (Loss of MDAFWP) (All - Major) and MSIVs Initially Fail to Close Auto/Manually/Locally and Steam Dumps Will not Close (All - C)</u></p> <ul style="list-style-type: none"> <li>• Recommend adding a note that Bus 16 is locked out and will not re-energize.</li> <li>• Recommend adding a note that the Applicants may manually backup the auto SI signal and that the RCP trip criteria will probably be met early in E-0.</li> <li>• Recommend adding an Evaluator's Note that the malfunction of the MSIVs not auto/manually/locally closing will be removed when the criterial for a red path on heat sink (FR-H.1) is reached. This prevents having an orange path on integrity.</li> <li>• Recommend adding Evaluator's Note that the steam dumps may be individually locally isolated.</li> <li>• Recommend adding the parameters that are checked of secondary heat sink in FR-H.1.</li> <li>• Recommend adding a note that the RCPs were stopped earlier due to RCP trip criteria.</li> <li>• Recommend adding a note that a condensate pump must be started.</li> <li>• Recommend adding an Evaluator's Note that the 12 S/G FW containment isolation valve is powered from bus 16 (which is locked out). The 12 S/G FW containment isolation valve will not auto close on the Containment Isolation (CI) signal. Its position can be verified on the CI panel.</li> </ul>

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Scenario Three	
Turnover	<ul style="list-style-type: none"> <li>Recommend changing the tube leak to the "11" S/G for consistency between scenarios.</li> </ul>
Event 1	<p><u>Swap Running CC Pumps with Failure of the CC HX Cooling Water Inlet Valve to Remain Open. (LCO Entry) (BOP - C)</u></p> <ul style="list-style-type: none"> <li>Recommend adding request for pump swap to the shift turnover. This allows pre-job brief to occur prior to start of scenario and saves time during the scenario.</li> </ul>
Event 2	<p><u>Turbine first Stage Pressure White Channel (PT-485) Fails Low (RO - I)</u></p> <ul style="list-style-type: none"> <li>Recommend adding the RO reports malfunction / alarm to SRO, refers to ARP, and carries out applicable actions in ARP.</li> <li>Recommend adding the SRO directs RO to carry out applicable actions.</li> </ul>
Event 3	<p><u>Loss of Main Generator Bus Duct Cooling (and Power Reduction) (RO-R) &amp; (BOP-N)</u></p> <ul style="list-style-type: none"> <li>Recommend adding the RO/BOP reports malfunction / alarm to SRO, refers to ARP, and carries out applicable actions in ARP.</li> <li>Recommend adding the SRO directs RO/BOP to carry out applicable actions.</li> <li>Recommend adding an Evaluator's Note that the next event will be entered when reactor power reach 85%.</li> <li>Recommend adding which control systems are checked in 1C1.4 AOP1.</li> </ul>
Event 4	<p><u>Failure of a RCCA Bank to Move (RO - C)</u> <u>Failure of Rod G-11 to Move (All - C)</u></p> <ul style="list-style-type: none"> <li>Recommend revising the malfunction to be a failure to move of one rod in control bank "D." The event would begin during the down power in event 3. The Applicants would have to observe that all control rods were inserting (using IRPI) for Tave control and all control rods were within TS limits.</li> </ul> <p>Based on conditions in the scenario, the original malfunction (failure of a RCCA Bank to Move) takes a long time to show itself. Additionally, the rod control system may already be in manual for the down power so there would not be any observable action by the Applicant to mitigate the malfunction. Finally, the malfunction only provides a limited opportunity to evaluate the Applicants ability to diagnosis and mitigate the malfunction.</p>