	1.	2.	3. Psyc	hometric F	laws			4. Job	Content Fla	ws		5. Otl	ner	6.	7.	
Q	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only	Source (B/M/N)	Status (U/E/S)	8. Explanation
1	Н	3					X					×		В	U	K/A mismatch, distractor A is correct also. Rewrote Distractor A.  Changed "The reactor is still critical" to "Power Range channels are 6%".  This indicates that the heat being removed is equivalent to maximum decay heat load. The reactor is subcritical however, 6% power exceeds the required 5% to transition out of FR-S.1 at step 7. This sets the question up so that the student must still utilize knowledge of step 8, but better aligns with the K/A for decay heat only and not heat from power operation.
2	Н	3												В	S	
3	Н	3												N	E	Changed distractors to "normal" and "prohibited"
4	Н	3												N	E	Edited stem to "what is the first action…"
5	Н	3												В	E	Changed stem statement to "What is the cause of these indications."
6	Н	3										х		В	E	K/A not matched well. Added bullet in the stem to discuss alarm. Added details to stem about alarm response manual. Subset issue with distractors A and C. Rewrote question with edits.
7	н	2												N	S	
8	F	2												N	E	Edited stem to remove bullets and just ask question directly.

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

- 1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- 2. Enter the level of difficulty (LOD) of each question a 1 (easy) to 5 (difficult); questions with a difficulty between 2 and 4 are acceptable.
- 3. Check the appropriate box if a psychometric flaw is identified:
  - "Stem Focus": The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
  - "Cues": The stem or distractors contain cues (e.g., clues, specific determiners, phrasing, length).
  - "T/F": The answer choices are a collection of unrelated true/false statements.
  - · "Cred. Dist.": The distractors are not credible; single implausible distractors should be repaired, and more than one is unacceptable.
  - "Partial": One or more distractors are partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by the stem).
- 4. Check the appropriate box if a job content flaw is identified:
  - "Job Link": 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).
  - "Minutia": 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).
  - "#/Units": The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).

## **Written Examination Review Worksheet** Form ES-401-9 ES-401

- "Backward": 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 K/As that are designated "SRO-only." (K/A and license-level mismatches are unacceptable.)
   Enter question's source: (B)ank, (M)odified, or (N)ew. Verify that (M)odified questions meet the criteria of Form ES-401, Section D.2.f.
- Based on the reviewer's judgment, is the question, as written, (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
- At a minimum, explain any "U" status ratings (e.g., how the Appendix B psychometric attributes are not being met).

	1.	2.	3. Psycl	nometric F	laws			4. Job	Content Fla	ws		5. Othe	er	6.	7.	
Q	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only	Source (B/M/N)	Status (U/E/S)	8. Explanation
9	Н	3												N	E	Changed question to station blackout conditions.
10	F	2												N	S	
11	F	3												N	S	
12	Н	3												N	S	
13	F	2												N	S	
14	Н	3										Х		В	U	K/A Mismatch. Question rewritten to ask for the "reasons why" pertaining to actions in EOPs for loss of instrument air.
15	F	3												В	S	
16	Н	3												В	E	Typo in stem on RH-V22 corrected
17	F	2												В	Е	Rewrote distractor A to make more plausible.
18	Н	3												В	Е	Typo "form" – edited to "from'
19	F	2												N	S	
20	F	3												М	Е	C is implausible. Rewrote 'C'
21	F	3												В	S	
22	Н	3												N	E	Edited stem to "next" and edited distractor A to "continue to lower"
23	Н	3				х								N	U	A is correct also. Changed distractor "trip the reactor" to "Insert control rods to 10 steps above the RIL".  Added "in accordance with OS1000.07, "Approach to Criticality"?".
24	F	2												В	S	
25	Н	2												В	E	Upped the difficulty by having candidate calculate subcooling needed for question instead of being given the subcooling.

	1.	2.	3. Psycl	nometric F	laws			4. Job	Content Fla	ws		5. Othe	er	6.	7.	
Q	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only	Source (B/M/N)	Status (U/E/S)	8. Explanation
																Changed question from "Can one CCP be stopped and why, or why not?" to "Can one CCP be stopped at this time and why, or why not?"  Changed C from: No. Subcooling must be greater than the value required in step 13c. This ensures adequate subcooling will be maintained after one CCP is stopped. to: No. Subcooling must be greater than the value required in step 13c  Changed D from: No. Subcooling requirements apply until hot leg temperatures are below 250 F. Then adequate subcooling will be maintained after one CCP is stopped. to: No. Subcooling requirements apply until hot leg temperatures are below 250 F.
26	F	3				Х								N	U	C2 and D2 implausible – equalizing boron is not connected with PTS. Rewrote C2 and D2.
27	Н	3												В	E	Stem edited to "check that the penetrations are isolated"
28	F	3												В	S	
29	F	2												В	E	B is implausible, a mistake should not result in a positive outcome. Rewrote question.
30	Н	3												В	S	
31	Н	3												Е	U	A is not plausible Changed RCS Temp column to "Stable" in distractor A3.
32	F	3				Х								N	U	C and D implausible. Edited C1 and D1
33	Н	3												N	S	
34	F	3												N	S	
35	F	3												В	E	Edited stem to "automatic" and made distractors look more similar
36	Н	3												В	S	

	1.	2.	3. Psycl	nometric F	laws			4. Job	Content Fla	iws		5. Othe	er	6.	7.	
Q	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only	Source (B/M/N)	Status (U/E/S)	8. Explanation
37	Н	3	×											В	U	There is no time element in the stem to know when things are occurring, so A could be correct also. Edited stem and distractors to include heaters and PORVS.  Changed question from PT-455 failing low to 457 failing low with an alternate channel alignment. This avoids overlap with Sim Scenario #1.
38	F	2												В	S	
39	Н	2												М	s	
40	F	2												В	S	
41	Н	3										Х		В	U	K/A mismatch, question does not ask about bus power supplies. Rewrote question.
42	Н	3										Х		N	U	K/A mismatch, question does not ask about bus power supplies. Rewrote question.
43	F	3												В	S	
44	Н	3												В	E	Stem and distractors read awkwardly. Rewrote stem and distractors to include "due to".
45	Н	3												В	s	
46	Н	3												В	Е	Simplified the stem to less bullets.
47	F	2										Х		В	U	Question does not ask about D/G load limits. Rewrote question.
48	F	3												В	Е	Typo, changed stem to "de-energized"
49	F	3												N	Е	Added "IAW procedure" to stem
50	F	3												В	S	
51	F	3												N	S	
52	F	3												В	E	A is implausible. Rewrote A

	1.	2.	3. Psyc	nometric F	laws			4. Job	Content Fla	iws		5. Othe	er	6.	7.	
Q	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only	Source (B/M/N)	Status (U/E/S)	8. Explanation
53	Н	2												В	S	
54	Н	3												В	E	Rewrote distractors to ask only 1 part instead of 2 part dstractors. Rewrote question to include both Phase A and B.
55	Н	3												В	S	
56	F	3				Х								N	U	A2 and B2 are not plausible as AFD is not a concern at startup. Rewrote distractors.
57	Н	3												В	S	
58	Н	2												N	S	
59	Н	3												В	Е	Edited distractors to two columns instead of three
60	F	2												N	E	Question required to be rewritten. Original question had implausible distractor and poor stem focus
61	Н	3												В	S	
62	Н	2												В	S	
63	F	3												N	Е	Added plausibility statements for A, B, and C.
64	Н	3												N	S	
65	Н	2												N	S	
66	F	2												В	Е	Edited stem from could to would
67	F	3												N	S	
68	Н	2												N	Е	Increased the difficulty by changing the distractors to unidentified leakage from pressure boundary
69	F	2												В	S	

	1.	2.	3. Psyc	hometric F	laws			4. Job	Content Fla	iws		5. Oth	er	6.	7.	
Q	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only	Source (B/M/N)	Status (U/E/S)	8. Explanation
70	Н	3												В	S	
71	F	3												В	S	
72	F	3												N	Е	The question is too system specific for Tier 3. Question has been rewritten.
73	F	3												В	S	
74	Н	3												В	E	The question is too system specific for Tier 3. Question has been rewritten.
75	Н	3												N	S	
76	Н	3												В	s	
77	F	3											Х	N	U	Rewrote question so that SRO must select recovery procedure.
78	Н	3				Х								N	U	A2 and C2 are not plausible. Rewrote question based on further feedback on using reference
79	Н	3												N	E	Distractors C and D do not reference procedures like A and B do. Rewrite stem to include procedure name and edited all distractors.
80	Н	2												N	s	
81	Н	2				х								N	U	B and D are implausible. There is nothing in the stem on loss of emergency coolant, so ECA-1.1 is not plausible. Rewrote distractors. Added "and in accordance with that procedure, why" to question stem.
82	Н	3										Х		N	U	K/A mismatch. Rewrote question to test ability to diagnose rod on bottom.
83	Н	3												N	E	Edited distractors referring to TS 3.3.1 action 6 (B and D)
84	Н	3												В	S	
85	Н	2												N	S	Added "per ES-0.2, "Natural Circulation Cooldown" to question stem".

	1.	2.	3. Psych	nometric F	laws			4. Job	Content Fla	iws		5. Othe	er	6.	7.	
Q	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only	Source (B/M/N)	Status (U/E/S)	8. Explanation
86	Н	2												N	E	Edited stem to reflect prior to stopping D RCP. Also edited distractors to remove "stop the D RCP"
87	Н	3												В	S	
88	Н	3											Х	N	U	Not SRO only as a TS bases question. Rewrote question
89	Н	3												N	s	
90	Н	3										Х		N	U	K/A not matched. Rewrote question.
91	Н	3												В	E	Edited distractors to remove the statement "Verify that the containment ventilation systems are isolated," since this is in all 4 distractors.
92	Н	3												N	E	Changed: Radiation Monitor RM-6549, "Lo Range Spent Fuel Pool" goes into high alarm. What procedure will be entered (1) and what actions will be taken to minimize personnel exposure (2)? to: Plant conditions: Radiation Monitor RM-6549, "Lo Range Spent Fuel Pool" is in high alarm. Spent Fuel Pool Level is 25.5 feet.
93	Н	3												N	Е	Added "in FR.H-1, "Response to Loss of Secondary Heat Sink"?" to question stem.
94	F	2				X								N	U	B and D are implausible because they are CROs. Rewrote distractors
95	Н	3												N	E	Rewrote distractors to 2x2 format, 2 column
96	F	3												В	S	
97	Н	3												В	s	
98	F	2												В	S	
99	Н	2												В	S	

ES-401 9	Form ES-401-9
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	1. LOK	2. LOD	3. Psycl	nometric F	laws			4. Job (	Content Fla	ws		5. Othe	er	6. Source	7. Status	8. Explanation
Q	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only	(B/M/N)	(U/E/S)	о. Ехріапацоп
100	Н	3												N	E	Edited stem to state when ECA-0.0 was entered (at step 5)