| Q# | 1. LOK (F/H) | 2. LOD (1-5) | 3. Psychometric Flaws | | | | | 4. Job Content Flaws | | | | 5. Other | | 6. | 7. |
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
1	H	3	X				X					X		U	stem needs to identify what actions have already been completed before asking what actions should be "next"; 'A' appears to be correct; doesn't test knowledge of INTERRELATIONS btwn Rx trip and STATUS PANEL per KA;
2	F	3										X		U*	doesn't test ability to operate FW pumps for VAPOR SPACE ACCIDENT per KA; recommend characterizing the accident as Vapor Space;
3	H	3		X								-		U*	dictating in the stem to use the 68F curve is an unnecessary cue - recommend deleting the "...per Plant Curve..." portion of the cue; "slowly" is misspelled in the cue;
4	F	3										-		S	
5	F	3										-		S	
6	F	3										X		U	Q doesn't address LOSS OF RX COOLANT MAKEUP per KA;
7	H	3				X						-		U*	'C' isn't credible since it doesn't deal with letdown; replace "drop" with "return to normal" for both 'B' and 'C';
8	H	3										-		S	
9	H	2										-		S	

Instructions
[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 using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).

3.   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.
   ·   One or more distractors is (are) 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).

4.   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.

5.   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).

6.   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?

7.   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		
10	H	3				X						-		U*	are 'B' and 'D' credible?
11	F	3										-		E	be consistent with SG nomenclature ('SG 1D' or 'SG D'); change 'C' to "verify automatic closure..." and 'D' to "manually close...";
12B	F	3				X	X					X		U	doesn't test ability to operate HPI during loss of FW per KA;
13	F	3					X					X		U	'C' is also correct; doesn't test knowledge of REASONS for EOP actions per KA;
14M?	H	3				X						-		U*	need parent Q to determine if it is "modified"; change stem question to simply ask what the SCM is; change 'C' and 'D' to be subcooling based on the other temperatures provided;
15B	H	3										-		S	
16B	H	3										-		S	NRC 2001;
17B	H	3										X		U	doesn't test knowledge of REASONS for EOP actions per KA;
18	F	3				X						-		U*	'B', 'C', and 'D' don't seem credible;
19B	H	3										X		U	doesn't test knowledge of REASONS for relationship btwn PZR PRESSURE INCREASE and charging/letdown imbalance per KA;
20B	H	3										-		E	make the answer column headings "Switch in Normal" and "Switch in Bypass" for clarity;
21	F	3					X					-		U*	change stem to "...NOT an entry condition to ..."; 'C' is the only listed answer that is not listed as an entry condition for this procedure - 'B' is not the correct answer;
22B	H	3					X					-		U*	'A' and 'B' should be 484F, otherwise no correct answer; explanation of why 'A' is incorrect has a mistake;
23B	H	3										-		S	
24B	H	3						X				-		E	this is the kind of question that directly fits 55.43.b.5 for SRO-only knowledge - seems a little beyond the scope of RO - is there a learning objective that supports an RO needing to know this?
25B	H	2										-		S	
26	F	3										-		S	
27B	F	3				X						-		U*	'B' is not credible;
28	F	2				X						-		U*	'A' is not credible;
29	F	3										-		S	

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		
30B	H	3					X					-		U*	'D' is also technically correct; recommend rewording to say "VCT level will continue to lower until it causes the operating CCP suction to automatically align to the RWST at 3%"
31	F	3										-		S	
32	H	3				X						-		U*	'A' and 'D' are not credible ("increases"); try "decreases/decreases" and ...he same/remains the same";
33	F	3										-		S	
34	H	3										-		E	this question doesn't really test knowledge of the isenthalpic expansion - I recommend adjusting the question to a starting pressure of 1400#; typo in stem (delete second "at");
35	H	3				X						-		U*	'A' is not credible (adverse conditions in stem conflict with "no action");
36	F	2										-		S	
37M?	H	3				X						-		U*	need parent Q to validate "modified"; 'A' and 'C' are not credible (try replacing "increasing" with "remains constant");
38B	F	3										-		S	
39B	H	3										-		S	
40B	F	3										-		S	
41B	F	3										-		S	NRC 2001;
42B	F	3										-		S	
43	F	3										-		S	
44	F	3										-		S	
45	H	3										-		S	
46B	F	3				X						-		U*	'C' is not credible (try "cannot be closed but can be tripped from...");
47	H	3										-		S	
48M?	H	3	X									-		E	need parent Q to validate "modified"; should there be a number associated with both air receivers mentioned in the stem?

| Q# | 1. LOK (F/H) | 2. LOD (1-5) | 3. Psychometric Flaws | | | | | 4. Job Content Flaws | | | | 5. Other | | 6. | 7. |
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
49	F	3				X						-		U*	'C' is not credible;
50	F	3										-		S	
51	H	3				X	X					X		U	'A' is not credible; it is not clear why 'B' and 'C' are not also correct; doesn't test knowledge of POWER SUPPLIES to ESF MOVs per KA;
52	F	3										-		E	should 'B' indicate which ESF DG?
53	F	3										-		S	
54B	F	3				X						-		U*	'D' is not credible;
55	F	3		X		X						-		U*	rephrase stem to eliminate "isolate" - it cues the right answer; 'A' is not credible;
56	F	3				X						-		U*	'A' and 'C' wording is awkward ("...other control banks THROUGH...");
57	H	3										-		E	add "emergency" in front of "boration" on 'A' and 'C';
58	H*	3										-		E	LOK is H vice F;
59B	H	3	X			X						X		U	Add "Indicated CET temperature will:" to end of stem; 'C' and 'D' are not really distinct; doesn't test ability to monitor CETs to determine RCP OPERATION per KA;
60M?	H	3	X			X						-		U*	need parent Q to validate "modified"; change stem to "Containment Hydrogen concentration is 2%"; 'C' is not credible;
61	H	3										-		S	
62B	F*	3										-		E	LOK is F vice H;
63	H	3		X		X						X		U	'B' is not credible; doesn't test ability to monitor AUTOMATIC operation of ARM in changing ventilation alignment per KA - should probably delete KA; answer is cued by Q#92;
64	F	3				X						-		U*	'C' is not credible since it is practically the same as 'B'; 'D' is not credible;
65	H	3										-		S	
66B	F	1										-		U*	too easy; try asking which is NOT an approved way and use three of the approved ways as distractors and 'A' or 'D' as 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	Back-ward	Q= K/A	SRO Only		
67	F	2										-		S	
68B	F	3										-		S	
69	H	4					X					-		U	this is SRO-only - not appropriate for RO exam unless a specific learning objective is available;
70	F	3										-		E	"uncouple" is misspelled in 'A';
71B	H	3										-		S	
72B	H	4	X			X						-		E	stem doesn't make sense (how can one guy do the job at twice the distance from the job as two guys?); distractors need to be based on credible errors - recommend 83mrem for 'B' and 41mrem for 'D' based on failing to square the distance factor;
73M?	H*	3										-		E	LOK is H vice F;
74B	F	2										-		S	
75B	F	3										-		S	
76	H	2										-	-	S	
77	F	3										X	-	U	doesn't test knowledge of outside reporting requirements as regards LOSS OF RX COOLANT MAKEUP per KA;
78	H	3										-	X	U	not SRO-only (this is 55.41.b.10);
79	H	3										-	X	U	not SRO-only (this is 55.41.b.10);
80	H	3										X	-	U	doesn't test ability to REDUCE RAD LEVELS/EXPOSURE per KA;
81	F	3										X	-	U	doesn't test knowledge of EOP usage regarding LOSS OF SECONDARY HEAT SINK per KA;
82	H	1		X								-	-	U	this is a direct look-up; need to indicate specifically which reference will be provided; replace "it" with "power" in 'C' and 'D';
83	F	3		X		X						-	X	U	not SRO-only (this is 55.41.b); 'A' and 'B' are not credible due to cues from Q#92 that these ARMs do not provide CVI;
84	H	3										-	X	U	not SRO-only (this is 55.41.b.10);
85	H	3										-	-	S	
86B	H	3										-	-	S	

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		
87	H	3				X						-	X	U	'B' and 'C' are not credible since 'C' is a subset of 'B'; not SRO-only (this is 55.41.b);
88?	H	3										X	X	U	Q source not indicated; change "accident" to "event" in stem; doesn't test ability to predict the impact of or use procedures to mitigate FEEDING A DRY SG per KA; not SRO-only (this is 55.41.b.10);
89	H	3										-	-	S	
90	F	3										-	X	U	not SRO-only (this is 55.41.b.10);
91	H	1		X		X						-	-	U*	this is a direct look-up; 'C' and 'D' are not credible;
92	H	3										-	-	S	
	F	3										-	-	S	
94	F	2										-	-	S	
	H	3	X									-	-	E	is the stem worded correctly for indicating that the Rx is still at power - is this an ATWS?
96	H	3	X			X	X					-	-	U*	wording of stem allows for both 'C' and 'D' to be correct ('C' is a subset of 'D'); add "only" to 'A' to make it distinct from 'B';
97	H	3										-	-	E	change 'B' and 'C' to "...November 15, 0000...";
98	F	3	X			X						-	X	U	delete first two sentences of stem; 'B' is not credible; not SRO-only (this is 55.41.b);
99	F	4				X						-	-	U*	replace "exposure limit" with "needed exposure" in stem; add "only" to 'A' and 'B' and add "or Emergency Director" to 'C' and 'D' to make them credible;
100	F	3										-	-	E	this may arguably be SRO-only, but it is not 55.43.b.5;
RO 28B 5M	37H 38F		5	3	0	21	7	1	0	0	0	10	0	32U 12E	**RO TOTALS**
SRO 1B 0M	16H 9F		3	3	0	6	1	0	0	0	0	4	8	15U 3E	**SRO TOTALS**
															GENERAL COMMENTS: 1. There are too many Q's dealing with containment ventilation/purge (50, 63, 71, 83, 92)
															NOTE: Bank questions are indicated by B; Modified are indicated by M; comment resolution is indicated in *blue*;