

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/ M / N)	7. Status (U /E /S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist	Partial	Job-Link	Minutia	# / Units	Back ward	Q – K/A	SRO Only			

General comments:

- Several questions mix 2x2 questions such that one part starts with a number and the other part has the number in the middle of the questions in an underline. Recommend being consistent within the question. **No mixed 2x2 questions**
- For all modified bank questions, in the final submittal, provide the parent question in the exam.. **Parent question will be submitted in final submittal**
- Need to adjust answer distribution in SRO section. Currently there are no answer ""D"". **Added three (3) 'D' answers**

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).
 - "Backward": 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 K/As that are designated "SRO-only." (K/A and license-level mismatches are unacceptable.)
6. 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.
7. 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?
8. At a minimum, explain any "U" status ratings (e.g., how the Appendix B psychometric attributes are not being met).

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1	F	2												N	E S	There is nothing in the distractor analysis that states to insert a manual reactor and turbine trip. In fact, Addendum 131F states if a low frequency condition does or does not exist, then adjust voltage. Neither Addendums 131F nor 134D are included in my reference package. Added step 3.3 of Add 131F to explanation for trip. (>1.10 V/HZ ratio causes auto trip)
2	F	2												N	S	
3	H	2												N	E S	More information required in the stem to make D plausible, since there is nothing in the stem indicating that a condenser vacuum is established, which is required to place CAR to normal. Also, don't understand the necessity of adding dumping steam to the distractor. Changed distractor D to raise at least 1 intact S/G to > 25% NR level (step 10 of procedure)
4	H	2												B	S	
5	H	2												B	E S	Is shutting down plausible? If P-6 was met, what would be the actions? Per step 5.1.1.e equipment failure requires S/D per step 5.2.2. If P-6 met, no auto trip then perform step 5.2.2
6	H	2												N	E S	I am wondering if A could be considered correct. Not fully understanding your conduct of Ops, it seems to me that an immediate operator action would be to take manual control of the master controller, thus the first ACTION taken in OTO-BB-00006 would be to remove the failed channel from control. Taking controller to manual is not an immediate action as defined by step 4.7.1 od ODP-ZZ-00025
7	F	3												N	S	
8	H	2												B	E S	Regarding distractor D, what is the definition of an emergency? Is it the standard definition of NOUE, Alert, etc. I think one could argue it is correct. I also struggle with distractor A being plausible. Emergency was determined to be entry into the emergency network beyond a reactor trip.. Distractor A is action further in procedure.

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9	H	2												N	S	
10	H	2											X	B	U S	Does not meet the K/A. This question could be answered if this was a loss of feedwater or any other event that gets into ES-0.1. Additionally, not really monitoring or operating HPI. Replaced question to meet KA
11	F	3												B	S	This is a memory question, as all that is being asked if you know what color the lights are. If you had to analyze whether a trip occurred due to PR High Flux, then it would be comprehensive. Distractor B is week, but no other reasonable color to choose as an option. Changed to Fundamental
12	F	2												N	E S	Not a tier 1 question, can use system level knowledge to answer both parts of the question. Additionally, won't voltage be seen at both low speed and high speed relay speeds? Changed part 2 to action to secure D/G per E-1
13	H	3												B	S	
14	H	2												N	E S	Mixed fonts in the second pair of bullets. Is it operationally valid to have maintenance on the B EDG while the only running RHR pump is B? Distractor D not plausible because the third set of bullets clearly indicate voltage to one of the busses, even if they guess the wrong one. Fixed font and modified stem to make distractors more plausible
15	F	3						X						M	U S	Two correct answers. ECA-1.2 step 1c has you sequentially close and open RHR To Accumulator Injection valves, SI Pumps To Cold Leg Injection valve, and Boron Injection Header Outlet valve, but that step is bulleted, thus the valves can be checked in any order. Thus A and C are both correct. One spot in distractor A analysis uses ECA-2.1 vice ECA-1.2. Importance rating in header says "EA1.1" instead of "4.0." Modified stem and part 1 answers. Fixed imp rating and analysis writeup
16	F	3												B	S	2020 Exam (Prior 2 exams)

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17	H	4												N	E S	First bullet should state time to boil in the vessel, to not confuse with time to boil in the SFP. 4 hours doesn't really seem plausible. Can you make a plausible distractor less than 1.5 hours? Second paragraph of explanation incorrectly states OTO-EJ-00001 vice OTO-EJ-00002. A better part 2 distractor for A and C would be "Place RHR in Recirculation Lineup" since that is what step 4 RNO directs to Attachment A. Changed time and distractors as requested
18	H	2												N	E S	Is it possible to get rid of the reasons and just state A CCP is/is not injecting and SI pump is/is not injecting. By stating because "pressure is too high" in part 2, you are basically asking if they know the shutoff head of the pump. Changed as requested
19	F	2												N	E S	Distractor C part 1 differs in that there are two zeros in the panel number, and the other distractors only have one. There is little value in the second part of the question. Fixed panel numbers
20	H	3												M	E S	Not tier 1 question. Concerned this is SRO level. Changed KA and replaced question
21	H	3												N	S	
22	F	2												N	E S	Would prefer that containment parameters are provided and must determine that adverse containment exists. Added containment parameters to stem
23	H	2												N	E S	Stopping all RCPs is not credible since the question asks what action is required to "lower containment pressure." Can't you just action, "Which of the following actions should the crew take FIRST?" Modified stem part 2
24	H	3												N	S	
25	F	2												B	E S	Not a tier 1 question, can use system level knowledge to answer both parts of the question. Replaced question

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26	F	3												M	E S	Insertion limits remaining the same does not seem plausible for a control rod fully inserting into the core. This appears to be a modified bank of question 19 from the 2016 NRC exam. Insertion limits can't go higher. Changed to modified and added NRC exam info
27	H	2												N	E S	Questionable as a tier 1 question. The two parts are independent pieces of information which does not meet the intent of 2x2 questions. Part 2 is later in OTO actions Level malfunction
28	H	2												B	E S	The fact no leakoff flow is presented in the stem, C could also a correct answer. Added reason for RCP trip to stem
29	H	3												B	S	
30	F	3												N	S	
31	F	2												N	S	
32	H	3												N	S	
33	H	2	X											N	U S	There is no time factor in the stem, so until PCV8121 lifts, there is no correct answer. Added time limit to stem
34	F	3												N	E S	I think distractors A and C are subsets. IF HS-A is in the ISO / RUN position, it will immediately trip and lockout of the fire alarm. The lesson plan does not use the word lockout, but I think it would not restart after the fire alarm signal clears. Should probably state that B EDG is running for maintenance as a separate bullet. Modified stem and distractors
35	H	4												N	S	

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36	H	2												M	E S	With a bus lockout, it is not plausible to think both motor driven pumps would be running, even if you didn't know the power supply. I think the better choices are TDAFP only, B MDAFP only, both, and neither. While distractors of nothing happens are generally not preferred, I think it is a solid distractor since none of the SG levels will have reached TDAFAS or MDAFAS setpoints. Changed as requested
37	H	4										X		N	E S	While good question, does not meet the K/A. There is nothing in the question that talks about the effect the loss of the PRT had on the PCS. Everything that happened to the Pzr pressure was a result of the PORV and Block valve, not the loss of the PRT. Changed KA
38	H	3												N	E S	Are applicants required to know Attachment 2 from memory? Could not justify providing as a reference because it would be direct lookup. Yes, applicants should know from memory. No change made.
39	F	2												N	E S	Is there any reason the answer choices can't simply be "open" and "closed?" Changed to open and closed
40	H	2												M	S	None of the above type question. Any way to change the conditions in the stem such that one of the other distractors is correct? Why are coolers running in fast speed? Question probably Modified Bank of question 49 from the 2017 NRC exam. Coolers normally are in fast speed. Changed to modified and added NRC exam info
41	H	2												B	S	
42	F	2												B	S	
43	F	2												N	S	
44	H	3												M	E S	Potential cueing in that the correct answer is the only one that is not a relief valve. In final submittal, provide the parent question in the exam. Changed 1 relief valve distractor to non-relief valve

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45	F	3												M	E S	Manual transfer does not seem plausible since it is the static transfer switch. Plausible since there is a manual transfer switch and option in procedure
46	H	2												B	E S	Does the procedure selection make this an SRO question? Maybe more than overall mitigative strategy. No selection is based on purpose of ECA-1.1
47	F	2												B	S	Importance rating should be 3.3. Question history should indicate question last used on 2011 NRC exam, question 35. Changed imp rating and added NRC exam
48	F	4												N	S	
49	F	3												B	S	
50	F	3										X		N	U S	Does not meet the K/A. The question is not asking about EOP entry conditions. Replaced question
51	H	3												B	S	While it is plausible that one could believe there is a positive moderator coefficient and thus a negative SUR, it is not plausible to have a negative SUR and end up with power either at or above the POAH. Modified stem to make positive moderator coefficient plausible
52	H	2										X		B	U S	Does not meet the K/A. The question is not asking about predicting or monitoring parameters, nor asking about CCW flow rate. Replaced new question
53	H	3												B	S	
54	F	2												B	S	
55	H	3												N	E S	While distractor A is plausible, it is not plausible if the fan tripped because of overcurrent. Is it possible to have the fan trip in some other way to make A less obviously wrong. Modified stem for fan trip. Added additional information to 'A' distractor analysis
56	H	3												N	S	

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57	H	3												N	S	
58	F	4												M	S	In the final submittal, provide the parent question in the exam.
59	F	3												B	E S	Please check on this. Per the two bullets in the procedure and the distractor analysis, could the elevator be moved in the up direction if the crane hook was full up and within five feet? I know the second bullet says you can't move the hook if the elevator is already up, but what if it is within 5 feet already? Modified stem to correct this issue
60	H	3												N	E S	Question the operational validity of this question. As mentioned in the distractor analysis for putting master controller in manual, there is a failed instrument. So why would the controller still be in auto in the stem? Placing controller is not an immediate action. It would still be in auto until directed by procedure
61	H	2												N	S	Question the LOD. Part 1 is use of steam tables (low LOD) and while part 2 may be stretching knowledge of Ros, it is still a 50/50 guess.
62	F	3												B	S	2020 Exam (Prior 2 exams)
63	H	3												N	E S	I don't believe the loss of all spray is plausible, since one would have to believe that all spray comes off one loop. Can you make the part 2 distractors the loss of the two individual loops? Changed distractor to loop 1
64	H	3												N	S	
65	H	2												N	S	
66	F	2												B	E S	Prefer incorrect part 1 distractor be 1 year instead of 6. I think that is more believable. Changed part 1 to annually
67	H	2											X	B	U S	Does not meet the K/A. Not applying tech specs, just tracking them. (A good tier 3 RO level question for applying tech specs is QPTR). (Though this question was used on a prior NRC exam, being counted as unsat since the original question was written to a proper K/A statement.) Replaced question

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68	F	2												B	S	2020 Exam (Prior 2 exams)
69	F	3												N	S	
70	F	3												N	S	
71	F	2												B	S	
72	F	3												B	S	
73	F	3												B	E S	Normal maintenance is not plausible. Replaced distractor
74	F	3												B	E S	2020 Exam (Prior 2 exams) Not sure there is a correct answer. The RO is responsible for monitoring for criticality, but an RO does not have the authority to declare operability, thus he can't ensure they are operable. The question is not asking to RO to make an operability determination, which is a SRO function. The question asks what the ROs are responsible for during core offload which is a function of the Ros and performed by either a control room log search, turnover sheets or another form of plant status control. Additionally, Technical Specification LOC 3.9.3 states that 2 SR monitors shall be operable during Mode 6 "above the line" which is RO knowledge. Changed to a licensed operator
75	F	3												N	S	
76	H	3				X								M	U S	By stating the RHR pump is showing signs of cavitation, it is obvious you have to start the pump, leaving the other distractors implausible. Modified stem to say RHR pump is in PTL
77	H	3												N	S	
78	H	3											X	N	S	

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79	H	3											X		N	E S	Does not meet the K/A. By stating the annunciators are in, question is not asking to recognize abnormal indications for parameters that are entry level conditions into EOPs and AOPs (which could be an annunciator) Also, I fail to see the tie to 55.43(b)(1). Per discussion on 1/13/22, part 1 meets KA. Added new part 2 and changed tie to 55.43(b)(5)
80	H	3											X		N	U S	Does not meet the K/A. Nothing in the stem deals with the imminent loss of Pzr water inventory. In fact, Pzr level is steady. Modified stem to meet KA
81	H	3													M	S	
82	H	3													N	S	
83	H	4													M	S	
84	H	3													N	S	
85	H	2													N	S	
86	H	3													M	E S	Distractor B is not plausible. If offsite power is operable, why would you need to restore power to NB02. Revised question adding additional PCB trip. Part 1 question was revised. Correct answer changed along with the SRO tie to b.5 from b.2.
87	H	3													B	E S	Would prefer to see part 1 eliminated and just go with part 2 as a 1x4 question. Will still meet the K/A. Revised as directed. Reordered choices from shortest to longest which changed the correct answer location.
88	F	2													N	S	
89	H	3													B	E S	Part 2 can be determined simply by recognizing whether one train of CCW is inoperable. Therefore, the references are not necessary. Removed reference required

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90	F	4												N	S	In mode 3, will PA01 and PA02 always be on the startup transformer? Yes the only power sources to PA01 and PA02 are either the startup transformer or the unit aux transformers. In mode 3, PA01/02 will be on the startup transformer. This is not to be confused with the safety related 4160 VAC buses NB01/02 that may be powered from the switchyard's 13.8 kV ring bus. No change made.
91	H	4												N	S	
92	H	3												N	ES	Distractors B and D part 2 not credible. They discuss spent fuel accident, yet the alarms are in the new fuel storage area Replaced Distractor B & D part 2). Revised explanation to support new distractor.
93	H	2												N	S	
94	F	2												N	S	
95	F	2												N	ES	B is not plausible because during an exam, there is only one SRO in the simulator. Also, it could be that the shift manager has not yet arrived in the control room and a real possibility there would still only be the CRS. Replaced distractor B new distractor. In order to support the new distractor, the stem had to be revised and then each choice had to be revised to discuss the order of approval and action taken. Added initially to stem
96	H	2												N	S	
97	F	3												N	ES	Twice per 12 hour shift may be a better distractor since you usually have a morning and afternoon meeting and someone on night shift usually checks work packages before they leave. Updated distractor C and D part1) with "twice per 12-hour shift". Updated explanation for plausibility of this new distractor.
98	F	3												B	S	

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99	F	2												B	S	
100	F	3												B	E S	2019 Exam (Prior 2 exams). Provide explanation on why 75 minutes is a valid distractor. The explanation analysis was updated why the distractor of 75 minutes is plausible.