

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
1	F	3										Y	N	M	S	Minor editorial changes to Q stem
2	H	4										Y	N	N	S	Minor editorial changes to Q stem and answer choices
3	H	4										Y	N	B	S	Minor editorial changes to Q stem
4	H	3										Y	N	B	S	Original question replaced to more closely fit selected K/A
5	H	4										Y	N	N	S	Technical change to Q stem related to RETS pressure setpoint and added partial reference to include scram logic and MSV logic prints based on validation comments.
6	F	3										Y	N	N	S	Minor editorial changes to Q stem
7	H	4										Y	N	N	S	Minor editorial changes to Q stem
8	F	3										Y	N	N	S	Minor editorial changes to reflect plant labeling
9	H	4										Y	N	N	S	Technical changes to Q stem to identify minimum RPV level to prevent Thermal Stratification and determine if adequate DHR exist based on licensee comments. Maintained original K/A and K/A topic
10	F	3										Y	N	B	S	Minor editorial changes to Q stem
11	H	4										Y	N	N	S	Minor editorial changes to Q stem and answer choices
12	H	3										Y	N	B	S	Minor editorial changes for stem clarity
13	H	4										Y	N	N	S	Minor editorial changes to Q stem
14	F	3										Y	N	M	S	Changed the part of question stem from determining the availability of RECW system to identifying minimum required suction pressure of DWW system based on validation/licensee comments.
15	H	4										Y	N	B	S	Minor editorial changes to Q stem
16	H	4										Y	N	M	S	Minor editorial changes for stem clarity
17	H	4										Y	N	M	S	Minor editorial changes to Q stem
18	F	3										Y	N	M	S	Minor editorial changes to Q stem

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19	F	3										Y	N	N	S	Minor editorial changes to Q stem
20	H	3										Y	N	M	S	Minor editorial changes
21	H	4										Y	N	M	S	Changed answer choices to indicate pressure trend of "Steady" or "Cycling". Also made minor editorial changes to Q stem
22	H	4										Y	N	N	S	Changed the Q stem to add Hotwell and Equipment Drain collection capacity information, and made minor editorial changes to Q stem and answer choices
23	F	3										Y	N	N	S	Changed the Q stem to ask the applicant response of DW unit cooler fans as a result of large steam leak based on validation comments. Changed Q answer choices to reflect the technical stem change
24	H	4										Y	N	N	S	Minor editorial changes to Q stem
25	H	4										Y	N	M	S	Changed the question to test required actions associated with DWCV momentary loss of power restoration actions based on validation comments. Changed Q answer choices to reflect the technical stem change
26	H	4										Y	N	M	S	Added embedded reference (portion of SP/L leg of T-102) to Q and made minor editorial changes to answer choices. Changed Q K/A topic from EK3.02 to EK2.01 (based on licensee comments/ additional review determined to be better fit).
27	F	3										Y	N	N	S	Minor editorial changes to Q stem
28	F	3										Y	N	M	S	Minor editorial changes to Q stem
29	H	3										Y	N	M	S	Stem edited for clarity and to streamline question
30	F	3										Y	N	N	S	Minor editorial changes to Q stem and answer choices
31	H	4										Y	N	B	S	Minor editorial changes to Q stem
32	H	4										Y	N	M	S	Minor editorial changes to Q stem
33	H	3										Y	N	M	S	Minor stem edits for clarity
34	H	3										Y	N	B	S	Minor editorial changes for stem clarity

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35	H	3										Y	N	B	S	K/A changed to reflect original selection, incorrect K/A documented on draft question
36	F	3										Y	N	M	S	Minor stem edit to enhance clarity
37	F	3										Y	N	N	S	Removed the reference of shorting links to Q stem
38	H	3										Y	N	N	S	Minor edits to stem for clarity and answers edited to more clearly reflect the concept being tested
39	F	3										Y	N	N	S	Minor editorial changes to stem
40	H	4										Y	N	N	S	Editorial changes to stem for clarity
41	F	3										Y	N	M	S	K/A resampled to EK4.04 and question replaced
42	H	3										Y	N	N	S	Stem re-written based upon licensee feedback and distracters modified to suit
43	H	4										Y	N	M	S	Minor editorial changes to Q stem
44	F	2										Y	N	B	S	Editorial changes to distracters to more accurately reflect terminology
45	H	4										Y	N	M	S	Minor editorial changes for stem clarity
46	F	2										Y	N	N	S	No changes
47	F	3										Y	N	M	S	Minor editorial changes to answer choices
48	H	3										Y	N	M	S	Editorial changes to stem for clarity
49	F	3										Y	N	M	S	Minor editorial changes to stem
50	F	2										Y	N	M	S	Editorial changes to timeline for stem clarity
51	F	3										Y	N	N	S	Stem and distracters edited to more clearly reflect the concept being tested
52	H	4										Y	N	M	S	Changed the entire question to better match K/A due to original question being detailed knowledge towards instrument air compressors.
53	H	3										Y	N	N	S	Minor stem changes for clarity

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54	F	3										Y	N	N	S	No changes
55	F	3										Y	N	B	S	Minor editorial changes to Q stem
56	H	3										Y	N	B	S	No changes
57	F	3										Y	N	M	S	Minor editorial changes to answer choices
58	H	3										Y	N	N	S	Stem conditions reorganized for clarity
59	F	3										Y	N	N	S	Revise K/A topic to better reflect Q content while meeting sample plan requirement. Changed the bus for over current conditions and revised Q stem and answer choices to reflect the bus change. Other minor editorial changes to Q stem and answer choices.
60	H	4										Y	N	M	S	Minor changes in stem for distracter plausibility
61	F	2										Y	N	N	S	Minor editorial changes to distracters
62	F	2										Y	N	B	S	Minor editorial changes for technical accuracy
63	H	3										Y	N	N	S	Stem and distracters edited to more clearly reflect the concept being tested
64	F	3										Y	N	B	S	Changed the entire question to a bank Q that better matched K/A, due to original Q LOD too high based on requal exam open reference question source.
65	F	3										Y	N	N	S	Minor editorial changes to Q stem
66	F	2										Y	N	N	S	No changes
67	F	3										Y	N	N	S	Minor editorial changes to Q stem
68	H	4										Y	N	N	S	Minor distracter edit for technical accuracy and clarity
69	H	3										Y	N	M	S	Minor editorial changes
70	H	3										Y	N	N	S	No changes
71	F	3										Y	N	N	S	Minor editorial changes to Q stem
72	F	2										Y	N	B	S	K/A replaced due to low LOD of original K/A and question
73	F	2										Y	N	N	S	Minor editorial changes to stem

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74	H	4										Y	N	N	S	Revised Q stem to incorporate Trip procedure into answer choices, and revised initial conditions to better reflect answer choices
75	H	3										Y	N	N	S	No changes
76	H	4										Y	Y	N	S	Changed Q stem to identify the ST for 125 VDC battery and provide Terminal voltage and float current information to determine the TS actions. (based on licensee/validation comments)
77	H	4										Y	Y	N	S	Minor editorial changes to Q stem
78	H	4										Y	Y	N	S	Minor editorial/format changes to Q stem. Q concept remained unchanged.
79	F	3										Y	Y	N	S	No changes
80	H	4										Y	Y	N	S	Minor editorial changes to Q stem
81	H	4										Y	Y	N	S	Minor editorial changes to answer choices
82	H	4										Y	Y	N	S	Added embedded reference of partial T-101 RC/P leg, changed SBLC failure, deleted SLC level information, and added IRM and Control rod information following 30 min to Q stem.
83	H	4										Y	Y	B	S	No changes
84	H	4										Y	Y	N	S	Minor editorial changes to Q stem
85	H	4										Y	Y	N	S	Changed site boundary dose assessment value to 101 mREM and deleted the reason for dose assessment performance question statement. Changed the question statement to identify the procedure that required dose assessment. Changed Q stem and answer choices to reflect the technical change.
86	H	4										Y	Y	B	S	No changes
87	H	4										Y	Y	M	S	Changed from Unit 1 to Unit 2 in stem
88	H	4										Y	Y	M	S	Changed Core Spray Pump discharge pressure from 140 psig to 130 psig based original value being too close to setpoint for ADS logic. Also made minor editorial changes to Q stem
89	H	3										Y	Y	M	S	Stem conditions edited to clarify question and distracters simplified

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90	H	4										Y	Y	M	S	Stem edited to add initial conditions and distracters edited to reference included reference
91	H	4										Y	Y	B	S	Stem edited to add more specific initial conditions
92	H	3										Y	Y	N	S	Stem conditions edited to remove ambiguity
93	H	4										Y	Y	M	S	Minor editorial changes to Q stem
94	F	3										Y	Y	M	S	Question replaced due to lack of clarity in procedure
95	H	3										Y	Y	M	S	No changes
96	F	3										Y	Y	B	S	Changed question focus within same procedure and provided reference
97	F	3										Y	Y	N	S	Changed the Q stem to better reflect LS-AA-104 procedure 50.59 changes examples. Q concept remained same.
98	F	3										Y	Y	B	S	No changes
99	H	3										Y	Y	M	S	No changes
100	H	4										Y	Y	N	S	Minor editorial changes to Q stem

Disclaimer: These comments were on an <sup>NRC developed</sup> draft exam submitted many of which were prior to validation by licensed operators which unlike a licensee developed exam that is submitted after validation by licensed operators & resolution of all associated comments

J. CARUSO, Chief Examiner  
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#### 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.
  - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
  - 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. Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of 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" ratings (e.g., how the Appendix B psychometric attributes are not being met).