

Facility:		Date of Exam:		Exam Level:		RO	<input checked="" type="checkbox"/>	SRO	<input checked="" type="checkbox"/>
Item Description						Initial			
						a	b*	c*	
1.	Questions and answers are technically accurate and applicable to the facility.					SML	QA	JS	
2.	a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available. c. Correct answer explanation and distractor analysis provided (ES-401, D.2.g)					SML	QA	JS	
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401					SML	QA	JS	
4.	The sampling process was random and systematic. (If more than four RO or two SRO questions were repeated from the last two NRC licensing exams, consult the NRR/NRO OL program office).					SML	QA	JS	
5.	Question duplication from the licensee screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate. ___ The audit exam was systematically and randomly developed, or ___ the audit exam was completed before the license exam was started, or ___ the examinations were developed independently, or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication, or ___ other (explain).					SML	QA	JS	
6.	Bank use meets limits (no more than 75% from the bank, at least 10% new, and the rest new or modified); enter the actual RO/SRO-only question distribution(s) at right.	Bank	Modified	New		SML	QA	JS	
		42/12	10/1	23/12		SML	QA	JS	
7.	Between 38 and 45 questions of the questions on the RO exam and at least 13 questions of the questions on the SRO-only portion of the exam are written at the comprehension/analysis level (see ES-401, D.2.c); enter the actual RO/SRO-only question distribution(s) at right.	Memory	C/A			SML	QA	JS	
		31/7	44/18			SML	QA	JS	
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.					SML	QA	JS	
9.	Question content conforms to specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.					SML	QA	JS	
10.	Question psychometric quality and format meet the guidelines in Appendix B.					SML	QA	JS	
11.	The exam contains the required number of one-point, multiple-choice items; the total is correct and agrees with the value on the cover sheet.					SML	QA	JS	
a. Author		Sean M. Riley				Date			
b. Facility Reviewer (*)		Christina Aguiar				2/23/18			
c. NRC Chief Examiner (#)		David S. Kirk				2/23/18			
d. NRC Regional Supervisor		Donald Jackson				2/26/18			
Note: * The facility reviewer's initials or signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initials items in Column "c"; chief examiner concurrence is required.									

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	H	3												M	S	
2	H	2	X											N	E	Specify time frame and present conditions that create a LOOP.
3	F	2												B	S	
4	H	2												B	S	
5	H	2	X											B	E	Delete bullet about PAB rad alarm.
6	F	2												N	S	
7	F	2												N	S	
8	H	2												M	S	

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.
 - 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).
- 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).
- Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of 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" 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. 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				
9	H	2											X		M	U	KAMM. Q similar to Q36. Replace Q. Needs to address an ATWS.
10	H	1											X		N	U	Low LOD. KAMM. Q similar to scenario event. Replace Q.
11	F	2													B	S	
12	H	3													B	S	
13	<u>H</u>	3													B	S	
14	F	2													B	S	
15	F	2													N	S	
16	H	2													M	S	
17	H	2													B	S	
18	H	2													N	S	
19	H	2													B	S	
20	H	2													N	S	
21	F	2													B	S	
22	F	2	X												N	E	Capitalize "next".
23	F	2													N	S	
24	F	1	X				C,D								N	U	C & D not plausible. Make A & B into 2x2 choices.
25	H	2													N	S	
26	<u>F</u>	2													B	S	
27	<u>H</u>	2					C,D								M	U	Replace C & D with SCM & PZR level and RVLIS Full Range only.
28	F	2													B	S	

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	Backward	Q=K/A	SRO Only			
29	H	2												B	S	
30	H	2	X											M	E	Shorten stem to say steady state and all systems in auto.
31	H	2	X											N	E	Remove "CS-PK-131" in A and D.
32	F	1				X						X		N	U	KAMM. Only one AOV on list. Replace KA.
33	H	2	X											B	E	Provide RCS pressure to ensure accurate answer.
34	H	2	X											N	E	Deplete second part of question to avoid being an SRO Q.
35	H	2	X											B	E	Add logic statement to each distractor.
36	H	3												B	S	
37	H	3												B	S	
38	H	2												<u>B</u>	S	
39	H	3												B	S	
40	<u>F</u>	2												B	S	
41	H	2												B	S	
42	H	3												N	S	
43	H	2												N	S	
44	F	2												B	S	
45	H	2												N	S	
46	<u>F</u>	3	X											M	E	Just ask first part of Q for better KA match. (Avoid being an SRO Q.)
47	F	2												B	S	
48	H	2												B	S	

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			
49	<u>F</u>	2												N	S	
50	F	2												N	S	
51	F	2												M	S	
52	H	3												B	S	
53	H	2												B	S	
54	H	2												N	S	
55	<u>F</u>	2												N	S	
56	H	2										X		B	U	KAMM. Replace KA. (New KA matched original Q.)
57	F	2												N	S	
58	H	2												B	S	
59	H	2												N	S	
60	F	2												B	S	
61	H	3												B	S	
62	F	2												B	S	
63	F	2												B	S	
64	H	2												B	S	
65	H	2												B	S	
66	F	2												B	S	
67	F	2												B	S	
68	F	2												B	S	

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			
69	F	2										X		B	U	Weak operability call. KAMM. Replace.
70	F	2												B	S	
71	F	2												B	S	
72	H	2												M	S	
73	H	3	X											B	E	Replace "Unit Supervisor" with crew.
74	H	2												B	S	
75	H	2												B	S	
																H=44 => 58.6%; M=8 =>10.7%; N=23 =>30.7%; B=44 =>58.6%
																7 U's => 7/75 = 9.3% Unsat
76	H	2												B	S	
77	H	2	X											N	E	Eliminate potential for 2 nd correct answer.
78	H	2												N	S	
79	F	1											X	N	U	Not SRO-only. Replace. Re-selected KA.
80	H	2												M	S	
81	H	2												B	S	
82	H	2												B	S	
83	H	2												N	S	
84	H	2	X											B	E	Replace "MINIMUM" with most restrictive.
85	F	2												N	S	
86	H	2												B	S	

[illegible]