

NRC COMMENTS ON INITIAL EXAMINATION SUBMITTAL

WRITTEN EXAMINATION WORKSHEET, ES-401-9

AND REVIEW OF OPERATING TEST

FOR THE KEWAUNEE INITIAL EXAMINATION - AUG/SEP 2002

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	Backward	Q=K/A	SRO Only			
1R	H	3													S	NEW.
2B	H	2													S	MOD. (NRC 12/97 INPO Bank)
3B	H	2				✓									U	NEW. NRC: Distractors B & D indicate use of manual steam dump controller following control room evacuation. If manual steam dump controller unavailable outside control room can eliminate B and D. LICENSEE: No manual steam dump outside control room, will change B or D to make it a creditable distractor.
4B	F	4					✓								U	BANK. NRC: Change distractor 'C' to match sentence structure of others. In 'D' find a way to rephrase term "lost." LICENSEE: Agree to changes, also identified that "B." could also be correct, FW 12 isolation valve would also be affected. Will rewrite distractors.
5B	H	3													S	BANK. NRC: Knowledge of trips and interlocks is fundamental. LICENSEE: Have to know long term effects, normal lineup, control of Pzr change, what happened when faulted.

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.
 - More than one distractor is 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).
- 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).
- 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?
- At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

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			Stem Focus	Cues T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A		
6B	F	3									✓	S	MOD. NRC: K/A states "Knowledge of the reasons for the following responses (Actions contained in EOP for PZR PCS malfunction) as they apply to the Pressurizer Pressure Control Malfunctions;" however, question is based on actions taken in a Non-EOP procedure. (NRC 12/197 Kew) LICENSEE: Our actions for this KA are located in abnormal procedure. NRC: Accept question, problem with KA catalog, KA is in generic abnormal section, but asking for EOP actions.
7B	H	2										S	NEW. NRC: Question LOK is listed as H, given that stem states 2 S/G PORVs stick open recognition of isolation is fundamental. LICENSEE: Have to evaluate source of trip signal to determine if 1 or 2 MSIVs should have isolated.
8B	H	2										S	BANK. (NRC 2/96 WB)
9B	F	3										S	BANK. (NRC 1/02 PB)
10B	H	3									✓	U	MOD. NRC: K/A is "Knowledge of the reasons for the (Loss of steam dump capability upon loss of condenser vacuum) responses as they apply to the Loss of Condenser Vacuum." The question is seeking a DESCRIPTION of plant response. (NRC 2/02 PB) LICENSEE: Will rewrite choices to eliminate "reactor trip," and focus on "reasons...."
11B	H	3										E	NEW. NRC: Minor enhancement to responses. LICENSEE: Will incorporate.
12B	F	3										E	NEW. NRC: Minor enhancement to responses. LICENSEE: Will incorporate.
13R	F	2										S	NEW.
14R	H	3										S	NEW. NRC: Question is asking RO to identify a procedure transition which is an SRO function. LICENSEE: ROs are trained to recognize procedure transition points (parameters), although an STA normally performs that function. NRC: Licensee provided appropriate learning objectives and lesson plans to support.

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
15B	H F	2												S	NEW. NRC: Question LOK is listed as H, I believe it to be F due to type of reference info provided, either the applicant will know the answer or not without analysis.
16B	F	2			✓									E	NEW. NRC: Distractors "B" doesn't describe "consequences" as requested in the question stem. LICENSEE: Will remove "(if any)" from the stem and rewrite distractor "B" to include "consequence."
17B	F	2												E	MOD. NRC: Question overlaps JPM B.1.a to the point that one of the two should be replaced/rewritten. LICENSEE: Have already agreed to rewrite JPM B.1.a during operating exam review.
18B	H	2												S	BANK (NRC 2/87 INPO Harris)
19B	H	3												S	MOD. (NRC 1/02 PB)
20B	H	3	✓		✓									E	NEW. NRC: Answer "C" is only response that contains NOT. Balance distractors by adding "action." LICENSEE: Agreed.
21B	H	2												S	BANK. (NRC 10/2000 PB)
22R	H	3												S	BANK. (NRC 10/2000 PB)
23B	H	3												S	NEW.
24B	H	3												S	MOD.
25B	H	3												S	NEW.
26B	F	2												E	NEW. NRC: Reword stem to clarify actions taken, ie, "scram pushbuttons depressed." LICENSEE: Agreed.
27R	H	2												S	MOD. (NRC 12/00 Kew)
28B	H	3												S	NEW.

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		
29B	F	2												S	BANK. (NRC 6/97 PI)
30B	H	2												S	NEW.
31B	H	3												S	BANK. (NRC 12/97 KEW)
32B	HF	2												S	NEW. NRC: 1) Question is asking RO to identify a procedure transition which is an SRO function. 2) Question is F, not H. LICENSEE: ROs are trained to recognize procedure transition points (parameters); although an STA normally performs that function. NRC: Licensee provided appropriate learning objectives and lesson plans to support.
33B	F	2												S	NEW.
34B	H	4												S	BANK. (NRC 8/99 PB)
35B	H	2												S	NEW.
36R	H	3												S	MOD. (NRC 9/98 INPO Dresden)
37B	F	2			✓									E	BANK. NRC: All of the distractors appear to be parameter signals whereas the answer is a component within the system, thus stands out because of its difference. (NRC 8/96 INPO HBR) LICENSEE: The Tavg and avg power are averaged by a component (circuit), but will list B or D as a component (summer) to balance distractors.
38B	H	3												S	NEW.
39B	F	2					✓							U	BANK. NRC: "D" stands out because it is a generic statement, distractors are actions applied to specific components. LICENSEE: Will rewrite D to apply to component.
40B	H	2												S	NEW.
41B	F	2												S	NEW.
42R	F	3												S	NEW.

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	Backward	Q=K/A	SRO Only			
43B	H	3													S	NEW.
44R	H	2													S	BANK. (NRC 1/02 PB)
45B	H	3													S	BANK.
46R	H	2													S	BANK.
47B	H	2													S	NEW. NRC: Question is asking RO to identify a procedure transition which is an SRO function. LICENSEE: ROs are trained to recognize procedure transition points (parameters); although an STA normally performs that function. NRC: Licensee provided appropriate learning objectives and lesson plans to support.
48R	H	2													E	BANK. NRC: Include statement in stem about availability of steam tables. (NRC 2/96 DCC)
49B	F	2													S	BANK. (NRC 12/00 KEW)
50R	H	2													E	NEW. NRC: Capitalize "only" in distractors. LICENSEE: Agreed.
51R	H	3													S	NEW.
52B	F	2													S	NEW.
53B	H	2	✓				✓						✓		U	NEW. NRC: K/A is "Knowledge of the effect of a loss or malfunction of the following (Pumps) will have on the AFW components." This question is about impact on S/G Blowdown not AFW components. SG blowdown valves are part of AFW isolation. LICENSEE: Could not write a comparable question to meet K/A K6, will change to K/A K4.
54B	F	2													S	BANK. (NRC 1/02 PB)
55R	F	2													S	BANK. (NRC 12/00 KEW)
56R	F	2													S	NEW.

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	Backward	Q=K/A	SRO Only			
57R	F	2										✓		E	BANK. NRC: K/A is "Knowledge of design feature(s) and/or interlock(s) which provide for the following (sampling and monitoring of waste gas release tanks)." As written question matches K/A K4.04, isolation of waste gas release tanks. (NRC 12/00 KEW) LICENSEE: Will change K/A to K4.04. NRC: Agree, same K4 area.
58B	F	2												S	BANK. NRC: A) Neither 'B' or 'D' credible, no activity or B) applicant could assume S/G tube leak and select 'B.' Licensee: Can have one non-credible distractor. "B" is incorrect, would not have R-4 indication if a SGTTL was present.
59R	F	5								✓				U	NEW. NRC: Is refueling an SRO vice RO responsibility? Are ROs required to know refuel actions from memory? Are ROs trained on refuel actions? What is lesson plan and learning objective? LICENSEE: Discussed with operations, administratively controlled, operators not required to know from memory. Not appropriate for ROs, will re-select K/A and write new question.
60B	H	3												S	BANK.
61B	F	2												S	BANK. (NRC 4/88 INPO IP 3)
62B	H	3										✓		U	NEW. NRC: 012 RPS - K1, Knowledge of the physical connections and/or cause effect relationships between the RPS and the following systems: K1.04, RPIS. To answer question as written does not require knowledge of RPIS, therefore question does not match K/A. LICENSEE: Take info that reactor power decreased to 80% out of stem, would need RPI info. NRC: Agree.
63B	F	2												S	MOD.
64R	H	3											✓	E	NEW. NRC: Distractors lack credibility, suggest 1) change 'B' to delete "NOT," logic looks at Lo Tavg, thus with channel failed high no impact. 2) Change 'C' to 2/3 vs 4/4. Take common information from responses and state this info in stem. Also, add "...if any..." to stem. Licensee: Agreed.

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			
65B	F H	3													E	BANK. NRC: LOK listed is F, I believe it requires analysis. Applicant could assume that CS was just actuated then reach a different conclusion. LICENSEE: Will add "large break LOCA" to stem which would indicate that CS has been running for some time. NRC: Agree
66B	F H	2						✓					✓		U	BANK. NRC: Is this material that an operator is expected to know from memory? Not RO responsibility. Question doesn't meet KA for "predicting impact." LICENSEE: Provided objective and lesson plans. Operations agreed. Will rewrite question to include "prediction." NRC: If "predict..." incorporated, would make question H.
67B	H	2													S	BANK. NRC: {NRC 12/97 Kew}
68B	H	3													S	BANK.
69B	H	3		✓											E	NEW. NRC: Correct answer "C" stands out, add "...and test should be terminated." to "C" to balance distractors. LICENSEE: Agreed.
70B	H	3													E	NEW. NRC: See question page for change to stem. LICENSEE: Agreed.
71B	H	3													S	BANK.
72R	H F	2		✓											U	BANK. NRC: LOK listed is H, I believe it is fundamental memory based on knowledge of interlocks. Question #75 supplies answer to Q #72. LICENSEE: Will write new question.
73B	H	2													S	BANK.
74B	F	3							✓						S	BANK. NRC: Operation of the toggle switch goes beyond the K/A and requires implementing/recall of Abnormal procedure subsequent steps from memory. LICENSEE: Provided objective and Lesson Plan reference.
75B	F	2		✓											S	NEW. NRC: Question #75 supplies answer to Q #72 LICENSEE: Q#72 will be replaced.

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		
76B	F	3												S	MOD.
77B	FH	3										✓		U	NEW. NRC: Question LOK listed is F, I believe it requires analysis. Selected K/A is an A2, which has two parts: 1) predict impacts and 2) use procedures to mitigate etc. Question does not predict impact. LICENSEE: Will rewrite.
78R	H	3												S	MOD.
79R	F	2												S	BANK.
80B	H	2												S	BANK. (NRC 5/01 Kew)
81R	H	3	✓											U	NEW. NRC: Make answers consistent, A&B are diagnosis of problem; C&D are actions to take. LICENSEE: Agreed.
82B	F	3												S	NEW.
83R	H	3												S	NEW.
84B	F	3												S	BANK.
85B	F	3												S	NEW.
86B	F	3												S	NEW.
87B	H	3												S	NEW.
88B	F	2			✓									U	NEW. NRC: Stem is not required to answer question, replace/rewrite. LICENSEE: Rewrite choices and stem so that it isn't T/F.
89R	F	2												S	BANK. (NRC 1/02, PB)
90B	H	3												S	NEW.
91B	H	3												S	MOD.
92R	F	3												E	NEW.

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	Backward	Q=K/A	SRO Only		
✓ 93B	F	2												S	NEW.
✓ 94R	F	2												S	NEW.
95B	F	2												S	MOD. {NRC 1/02 PB}
✓ 96B	F	2												S	NEW.
✓ 97B	H	2												S	BANK.
98B	F	3												S	BANK. {NRC 1/02 PB}
99B	F	3												S	NEW.
100B	H	3												S	NEW.
✓ 1S	H	2												S	NEW.
2S	H	3												S	MOD. {NRC 2/02 Kew}
✓ 3S	H	3												S	NEW.
✓ 4S	H	2												S	NEW.
5S	F	2												S	NEW.
6S	F	2												S	NEW.
✓ 7S	H	3												S	NEW.
8S	F	3												S	MOD. {NRC 1/02 PB}
✓ 9S	F	2												S	BANK. {NRC 1/02 PB}
10S	F	3												S	MOD. {NRC 10/87 Bw}
✓ 11S	H	3												S	NEW.
✓ 12S	F	2												S	NEW.
✓ 13S	H	3												S	NEW.

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	Backward	Q=K/A	SRO Only		
✓ 14S	H	2												S	NEW.
✓ 15S	F	2												S	NEW.
16S	H	2												S	NEW.
✓ 17S	F	2												S	NEW.
18S	H	2												S	NEW.
✓ 19S	H	3												S	NEW.
20S	H	3												S	BANK.
✓ 21S	H	2												S	NEW.
22S	F	2												S	NEW.
23S	H	3												S	NEW.
24S	H	3												S	NEW.
✓ 25S	H	2												S	NEW.

✓ 30 initial review. AEB

	Higher	Fundamental	New	Bank	Modified
RO	14+42=56	11+33=44	54	9+28=37	3+10=13
SRO	17+42=59	8+33=41	58	1+28=29	3+10=13

Kewaunee Station Operating Exam Comments

- Suggest using colored (ie, yellow...) paper for the JPMs and white for the applicant procedures/handouts ...
- JPMs: NUREG 1021, ES-301, D.3.b, states that for each system selected for evaluation, select one task from the applicable KA catalog or site task list for which a JPM exists or can be developed.

Administrative JPMs:

JPM A.1.a Perform Pre-critical Checklist:

NRC: No comments.

JPM A.1.b Perform Manual Estimated Critical Position Calculation:

NRC: No comments.

JPM A.2:

NRC: No comments.

JPM A.3 (SRO) Emergency RWP Approval:

NRC: No comments.

JPM A.3 (RO) Perform Radiation Monitor Functional Test:

NRC:

- 1) Replace JPM. The JPM was not a Administrative JPM topic Category A.3 task, but rather a B.1 task, "Control Room Systems."

LICENSEE:

- 1) Facility will look at replace/rewrite.

JPM A.4 (SRO) Classify An Event per the Emergency Plan:

NRC:

- 1) Item 4 on the Event Notice form was identified as critical, but does not appear to be.

LICENSEE:

- 1) Agree, not critical.

JPM A.4 (RO) Manually Start the CRPA Recirculation System:

NRC:

- (1) Replace JPM. The JPM was not a Administrative JPM topic Category A.4 task, but rather a B.1 task, "Control Room Systems."

LICENSEE:

- 1) Facility will look at replace/rewrite.

System JPMs:

JPM B.1.a Perform Actions to Stop a CRW:

NRC:

- 1) Both B.1.a and B.1.g require applicants to recognize an abnormal condition and trip the reactor. The alternate path resolution is too similar, need to change one of the JPM end points. Suggest modifying B.1.a as follows: Have the farthest rod stop once rod control switch placed in Manual, diagnose the problem, and restore the rod configuration. In addition, the SROs could assess the TS LCO for misaligned rods.
- 2) Step 5 is not critical.

LICENSEE:

- 1) Look at rewrite.

JPM B.1.b With a Fire in a Dedicated Zone-Restore RCS Inventory Using the SI System:

NRC:

- 1) JPM Step 5 should be critical.
- 2) JPM Step 7 should be critical.

LICENSEE:

- 1) Look at rewrite.

JPM B.1.c Start a Reactor Coolant Pump:

NRC: No comments.

JPM B.1.d Secure Containment Spray Pumps:

NRC:

- 1) Do applicants perform this evolution during the scenarios?

LICENSEE:

- 1) Not scheduled to perform.

JPM B.1.e Shift Bus 5 from TAT to RAT:

NRC:

- 1) Combine JPM Steps 6 and 7 into one critical step.

LICENSEE:

- 1) Will do.

JPM B.1.f Place an Excore NI Channel OOS:

NRC:

- 1) JPM Step 7 is not critical.

LICENSEE:

- 1) Will look at.

JPM B.1.g Shift CCW Pumps:

NRC:

- 1) JPM Step 1 is critical.

In-Plant JPMs:

JPM B.2.a Perform Actions for CR Evacuation-Establish LD from DSDP:

NRC: No comments.

JPM B.2.b Locally Operate the SG PORV:

NRC:

- 1) No alternate path identified. Need to rewrite/replace with alternate path.

LICENSEE:

- 1) Incorrect JPM was sent, will submit correct JPM during validation week.

JPM B.2.c Locally Operate the DG:

NRC:

- 1) JPM Step 10 is not critical.
- 2) JPM Step 11 is not critical.

LICENSEE:

- 1) Will look at.
- 2) Will look at.

Scenarios 1, 2, & 3):

Scenario 1:

NRC:

- 1) Event 4, RCS leak, will accept as C failure providing we can get adequate evaluation of applicant (ie, diagnose leak, determine leak size, take action address leak such as increase charging... If we can't get adequate evaluation, we will not count as a C.
- 2) The reactor trip occurs after the leak becomes larger, and should be part of the M.

LICENSEE:

- 1) Will rewrite event, such that RCS leak is an event, but the increased leak size with reactor trip is part of the major transient.

Scenario 2:

NRC:

- 1) Event 4 will only count as a C for the RO if he performs substantive actions to diagnose the location of the leak and determine the size of the leak; otherwise, it will count as part of the M.

LICENSEE:

- 1) Understand.

Scenario 3: No comments.