

KEWAUNEE

May 2001

NRC COMMENTS ON WRITTEN EXAMINATION

Record No.	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		
1	R1 S1	H	3										ok	B	S	
2	R2 S2	H	3				X						ok	B	U	<p><u>NRC Comments:</u> Candidates will need to know status of XE prior to event ; otherwise could have multiple answers.</p> <p><u>Licensee's Resolution:</u> Agreed - added "The Reactor Tripped from 80% power after two (2) weeks of steady state operation." to the initial conditions.</p>
3	R3 S3	H	3										ok	B	S	
4	R4 S4	H	3										ok	B	S	
5	R5	H F	2										ok	R	E	<p><u>NRC Comments:</u> Why is this question "H" - should be "F" as question requires candidate to recite part of a memorized list.</p> <p>Note: this question is not considered "unsatisfactory" since the facility maintained the 50-60 "H" requirement.</p> <p><u>Licensee's Resolution:</u> Agreed .</p>
6	R6	H	3										ok	R	S	
7	R7 S5	H	2										ok	B	S	
8	S6	H	3										ok	S	S	
9	R8	H	3										ok	R	S	
10	R9 S7	H	3										ok	B	S	

Record No.	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		
11	R10 S8	H	2										ok	B	S	
12	R11 S9	F H F	2										ok	B	E	<p><u>NRC Comments:</u> Level of knowledge should be comprehensive, not memory. Question requires candidate to evaluate status of AFW pump in test and result of loss of offsite power condition.</p> <p>Note: this question is not considered "unsatisfactory" since the facility maintained the 50-60 "H" requirement.</p> <p><u>Licensee's Resolution:</u> Disagreed. Licensee argued that the individual only needs to know what the switch position meant - fundamental knowledge. Question could go either way so accepted licensee's position.</p>
13	R12 S10	H	2										ok	B	S	
14	R13	F	2										ok	R	S	
15	R14 S11	H	2										ok	B	S	
16	R15 S12	H	2										ok	B	S	
17	R16 S13	H	2										ok	B	S	
18	R17 S14	F	2										ok	B	S	
19	R18 S15	F	2										ok	B	S	
20	R19 S16	H	2										ok	B	S	
21	R20 S17	H	2										ok	B	S	

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				Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
22	R21 S18	H	2										ok	B	S	
23	R22 S19	F	2										ok	B	S	
24	R23 S20	H	2										ok	B	S	
25	R24	H F	2										ok	R	U	<p><u>NRC Comments</u> facility claims H; however, question is a memory level question - reciting information as it is taught in the classroom - essentially, what happens to condenser vacuum with air ejectors isolated.</p> <p><u>Licensee's Resolution:</u> Agreed that with discussion.</p>
26	R25 S21	F	2										?	B	S	<p><u>NRC Comments:</u> K/A asks for design features/ interlocks, question asks power supply sequence. doesn't match K/A.</p> <p><u>Licensee's Resolution:</u> Question does match K/A. question deals with the automatic transfer sequence which is a design feature.</p>
27	R26 S22	H	3										ok	B	S	
28	R27 S23	H	2										ok	B	S	
29	R28 S24	F	2										ok	B	S	
30	R29 S25	F	2										ok	B	S	<p><u>NRC Comments:</u> Note: This question was on the December 2000 exam. After discussion with J. Munro and S. Guenther (HQ) and D. Hills, it was determined that this was acceptable as previous years allowed 25 overlap questions.</p> <p>See letter to file for further information. (In addition, I performed a search of the license's bank and found similar wording questions therefore did not have a problem that this question was repeated.</p>

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				Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
31	R30 S26	F	2										ok	B	S	
32	R31	F	2										no	R	U	<u>NRC Comments:</u> K/A calls for knowledge of power supply - question calls for tag out, not a specific power supply <u>Licensee's Resolution:</u> Agreed. Submitted new question.
32N	R31	F	2										ok	R	S	
33	R32 S27	H	3										ok	B	S	
34	R33	H	2										ok	R	S	
35	R34 S28	H	2										ok	B	S	
36	R35 S29	F	2										ok	B	S	
37	R36 S30	H	2										no	B	U	<u>NRC Comments:</u> as written, this does not meet the K/A - R-21 has to "fail" high <u>Licensee's Resolution:</u> Agreed. Changed to include high failure.
38	R37 S31	H	3										ok	B	S	
39	R38 S32	F	3										ok	B	S	
40	R39	H	3										ok	R	S	
41	R40	F	2										ok	R	S	
42	R41 S33	F	3										ok	B	S	

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				Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
43	R42	F	1										ok	R	U	<p><u>NRC Comments:</u> not discriminating - candidate only needs to know temperature to answer the question.</p> <p><u>Licensee's Resolution:</u> Agreed. Changed distractors to be variations of T-547, 542 and P=1005, 1050.</p>
44	R43 S34	H	2										ok	B	S	
45	R44	F	2										ok	R	E	<p><u>NRC Comments:</u> Take out bullets in the plant information where the line is a wrap-around</p> <p><u>Licensee's Resolution:</u> Agreed.</p>
46	R45	F	2										ok	R	S	<p><u>NRC Comments:</u> Note: This question was on the December 2000 exam. After discussion with J. Munro and S. Guenther (HQ) and D. Hills, it was determined that this was acceptable as previous years allowed 25 overlap questions.</p>
47	R46	H	2										ok	R	S	<p><u>NRC Comments:</u> Note: This question was on the December 2000 exam. After discussion with J. Munro and S. Guenther (HQ) and D. Hills, it was determined that this was acceptable as previous years allowed 25 overlap questions.</p>
48	R47 S35	F	2										ok	B	S	<p><u>NRC Comments:</u> Note: This question was on the December 2000 exam. After discussion with J. Munro and S. Guenther (HQ) and D. Hills, it was determined that this was acceptable as previous years allowed 25 overlap questions.</p>
49	R48 S36	F	2										ok	B	S	
50	R49	F	2										ok	B	S	
51	R50	F	2										ok	R	S	
52	R51 S37	H	2										ok	B	S	

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				Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
53	R52 S38	F	2										ok	B	S	
54	R53 S39	H	3										ok	B	S	
55	R54	F	2										ok	R	S	
56	R55	F	2										ok	R	S	
57	R56 S40	F	2										ok	B	S	
58	R57	F	2										ok	R	S	
59	R58	F	2										ok	R	S	
60	R59 S41	H	3										ok	B	E	<p><u>NRC Comments:</u> Suggest using the following: "If the indicated quadrant power tilt was determined to be 1.10, what actions are required?"</p> <p><u>Licensee's Resolution:</u> Agreed. Made changes.</p>
61	R60 S42	F	2										ok	B	S	
62	R61	H	3										ok	R	S	
63	R62 S43	F	3										ok	B	E	<p><u>NRC Comments:</u> Verb tenses do not match. put the question in future tense, all other parts in past tense</p> <p><u>Licensee's Resolution:</u> Agreed. Made changes.</p>
64	R63	F	2										ok	R	S	

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				Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
65	R64 S44	F	2										ok	B	S	
66	R65 S45	F H	2					X					ok	B	U	<p><u>NRC Comments:</u> utility says F - should be H. this information is not required to be memorized, but can be deduced.</p> <p>Distractor b is a correct answer, inthat, tripping the condensate and feedwater pumps will stop them.</p> <p><u>Licensee's Resolution:</u> Agreed. Changed distractor b to "manually "</p>
67	R66 S46	H	3										ok	B	S	<p><u>NRC Comments:</u> The provided explanation does not make sense. distractor A is wrong because the accumulators are isolated and the depressurization worked. However, the question states the crew is "preparing" to depressurize. Re-verify the correct answer.</p> <p><u>Licensee's Resolution:</u> The last bullet states that the accumulators were isolated. This occurs at 210 psi - therefore the first stage of depressurization worked. Procedurally, would not depressurize from full to atmospheric without stopping to isolate the accumulators.</p>
68	R67	H	2										ok	B	E	<p><u>NRC Comments:</u> Verb tense may be confusing. consider using past tense.</p> <p><u>Licensee's Resolution:</u> Disagreed. Changing would result in different answer. No problems during validation. Will keep as-is.</p>
69	R68 S47	H F	2										ok	B	S	<p><u>NRC Comments:</u> this is a memorized basis question</p> <p><u>Licensee's Resolution:</u> Agreed.</p>
70	R69	H	3										ok	R	S	
71	R70	H	3										ok	R	S	

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72	R71 S48	H	3										ok	B	E	<u>NRC Comments:</u> Replace "How would... Why?" and "PRZR level would" from all four distractors <u>Licensee's Resolution:</u> Agreed.
73	R72 S49	H	2										ok	B	S	
74	R73 S50	F	2										ok	B	S	
75	R74 S51	H	2										ok	B	S	
76	R75 S52	H	3										ok	B	E	<u>NRC Comments:</u> Distractor a: The phrase "some channel" isn't correct - should be "a channel" or "some channels". distractor b: "the NI" should be "an NI" or "the NIs". <u>Licensee's Resolution:</u> Agreed.
77	R76 S53	H	3										ok	B	S	
78	R77 S54	H	2										ok	B	S	
79	R78 S55	H	2										ok	B	U	<u>NRC Comments:</u> this is a basis question. it was memorized. <u>Licensee's Resolution:</u> This is actually application of two basis - two topics which are not taught together. Believe this question is comprehensive. Question remained comprehensive.

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80	R79 S56	F	2										no	B	U	<p><u>NRC Comments:</u> The K/A is about RCPs & large LOCA. The question is about RCPs & small LCOA</p> <p><u>Licensee's Resolution:</u> Agreed. Submitted new question.</p>
80N	R79 S56	H	2										ok	B	S	
81	R80 S57	F	2										ok	B	S	<p><u>NRC Comments:</u> This question is comprehensive, not memory as some analysis is needed. (need to assess buses de-energized, and method of cooling.)</p> <p><u>Licensee's Resolution:</u> Disagree - question came straight from learning objectives and is a memory question.</p>
82	R81 S58	H	2										ok	B	S	
83	R82 S59	H	2										ok	B	S	<p><u>NRC Comments:</u> Note: This question was on the December 2000 exam. After discussion with J. Munro and S. Guenther (HQ) and D. Hills, it was determined that this was acceptable as previous years allowed 25 overlap questions.</p> <p>The given answer might not be correct. unless they have a procedure requiring the scram this would only be an entry into tech specs for multiple reactor protection channel failures.</p> <p><u>Licensee's Resolution:</u> Reference document (bases for E-0 requires trip if trip does not occur.</p>
84	R83 S60	H	2										ok	B	S	
85	R84 S61	H	2										ok	B	S	

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				Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
86	R85	F	3										no	R	S	<p><u>NRC Comments:</u> K/A involves specific system/ integrated plant procedures as they apply to Rediagnosis. The question asks when can ES-0.0 (Rediagnosis) be transitioned to. While EOPs are generally not considered "integrated plant procedures," this is the best match for the K/A selected. In addition, the licensee calls the EOPs "IPEPs" integrate plant emergency procedures.</p>
87	R86 S62	F	3										ok	B	S	<p><u>NRC Comments:</u> Note: This question was on the December 2000 exam. After discussion with J. Munro and S. Guenther (HQ) and D. Hills, it was determined that this was acceptable as previous years allowed 25 overlap questions.</p>
88	R87	H	3										ok	R	S	<p><u>NRC Comments:</u> RO knowledge? Question appears to be testing 10 CFR 55.43(b)(5) knowledge, not 55.41(b)(10).</p> <p><u>Licensee's Resolution:</u> Discussed with Wyatt Godes, George Baldwin and Dave Lohman of facility. All agreed that this was RO knowledge - that the question is testing big picture knowledge of EOPs.</p> <p>Added SG at 4% to make more systems oriented.</p>
89	R88 S63	H	3										ok	B	S	<p><u>NRC Comments:</u> RO knowledge? Question appears to be testing 10 CFR 55.43(b)(5) knowledge, not 55.41(b)(10).</p> <p><u>Licensee's Resolution:</u> Discussed with Wyatt Godes, George Baldwin and Dave Lohman of facility. All agreed that this was RO knowledge - that the question is testing big picture knowledge of EOPs.</p>
90	R89 S64	F	3										ok	B	S	<p><u>NRC Comments:</u> RO knowledge? Question appears to be testing 10 CFR 55.43(b)(5) knowledge, not 55.41(b)(10).</p> <p>Note: This question was on the December 2000 exam. After discussion with J. Munro and S. Guenther (HQ) and D. Hills, it was determined that this was acceptable as previous years allowed 25 overlap questions.</p> <p><u>Licensee's Resolution:</u> Discussed with Wyatt Godes, George Baldwin and Dave Lohman of facility. All agreed that this was RO knowledge - that the question is testing big picture knowledge of EOPs.</p>

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				Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
91	R90 S65	H	3										ok	B	S	
92	R91 S66	H	3										ok	B	S	<p><u>NRC Comments:</u> RO knowledge? Question appears to be testing 10 CFR 55.43(b)(5) knowledge, not 55.41(b)(10).</p> <p><u>Licensee's Resolution:</u> Discussed with Wyatt Godes, George Baldwin and Dave Lohman of facility. All agreed that this was RO knowledge - that the question is testing big picture knowledge of EOPs.</p>
93	R92	F	2										ok	R	S	
94	S67	F	2										ok	S	S	<p><u>NRC Comments:</u> Note: This question was on the December 2000 exam. After discussion with J. Munro and S. Guenther (HQ) and D. Hills, it was determined that this was acceptable as previous years allowed 25 overlap questions.</p>
95	S68	F	2										ok	S	E	Delete "of" from "An AO reports of" in the stem
96	S69	H	3										ok	S	S	
97	S70	F	2										ok	S	S	
98	S71	F	2										ok	S	S	
99	S72	H	3										ok	S	S	
100	S73	H	3										ok	S	S	
101	R93 S74	F	2										ok	B	E	<p><u>NRC Comments:</u> The plant conditions information may be deleted from the question</p> <p><u>Licensee's Resolution:</u> Agreed. Deleted.</p>

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				Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
102	R94 S75	F	2										ok	B	E	<p><u>NRC Comments:</u> in distractor A, change "the accident/recovery period" to "an accident" to match other distractors. this looks like is was copied from tech specs.</p> <p><u>Licensee's Resolution:</u> Agreed. Deleted "recovery period."</p>
103	R95 S76	F	2										ok	B	S	
104	R96	H	3										ok	R	S	
105	R97 S77	H	3										ok	B	S	
106	R98	H	3										ok	R	S	
107	R99	H	3										ok	R	S	
108	R100 S78	F	2										ok	B	S	
109	S79	F	2										ok	S	S	
110	S80	F	2										ok	S	S	
111	S81	F	2										ok	S	S	
112	S82	H	3										ok	S	S	
113	S83	H	2										ok	S	S	
114	S84	H	3										ok	S	S	

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115	S85	H	3										ok	S	E	<p><u>NRC Comments:</u> Stem states, "all equipment has function properly." something failed to cause the LOCA. Modify the stem to say ECCS equipment functioned properly.</p> <p><u>Licensee's Resolution:</u> Agreed. Changed to state that all ESF equipment responded as expected.</p>
116	S86	H	3										ok	S	E	<p><u>NRC Comments:</u> distractor 'A' - add "be" between "to" and "used "</p> <p><u>Licensee's Resolution:</u> Agreed.</p>
117	S87	H	2										ok	S	S	
118	S88	H	2										ok	S	S	
119	S89	F	2										ok	S	S	
120	S90	F	2										ok	S	S	
121	S91	F	2										ok	S	S	
122	S92	F	2										ok	S	S	
123	S93	F	2				X						ok	S	U	<p><u>NRC Comments:</u> As written, the lowest temperature and highest boron concentration will always be correct even if it is not the specified correct answer. Also, can deduce that distractor a is not right because if it were then all would be correct.</p> <p>Add a third requirement if possible or specify "MINIMUM required"</p> <p><u>Licensee's Resolution:</u> Agreed. Added "MINIMUM" to stem question.</p>

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124	S94	H	2										ok	S	S	
125	S95	H	2										ok	S	S	
126	S96	F	2										ok	S	S	
127	S97	H	2										ok	S	S	
128	S98	H	2										ok	S	E	<u>NRC Comments:</u> third bullet "valve" should be "valves" fifth bullet "NAO" should be "NAOs" <u>Licensee's Resolution:</u> Agreed.
129	S99	F	2										ok	S	S	
130	S100	F	2										ok	S	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.
 - 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).
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).

Record Number
032

QUESTION

The following plant conditions exist:

- A plant cooldown to cold shutdown is in progress.
- The RCS is at 425 deg. F. and 900 psig.
- A fire occurs in MCC-62B and is extinguished.
- MCC-62B is damaged and CANNOT be re-energized.

How do these conditions effect the plant reaching cold shutdown?

- A. Since the required Motor Valves are powered from MCC-62A, reaching cold shutdown is unaffected.
- B. Only RHR Train A Loop Suctions are available due to the loss of power to RHR-1B, Loop B Hot Leg To Residual Heat Removal Pump, and RHR-2B, Loop B Hot Leg To Residual Heat Removal Pump.
- C. Neither train of RHR can be established since RHR-11, Residual Heat Removal To Loop B Cold Leg Isol., and LD-60, Residual Heat Exchanger To Letdown Line, lose power.
- D. Flow can only be established through RHR Pump A and Train B of Component Cooling is unavailable due to the loss of power to CC-6B, Component Cooling Heat Exchanger B Outlet.

Answer	Question Source	Cognitive Level	Question Type	Level
B	N/A	Memory	New	RO
Tier/Group	K/A#	K/A Rating (RO/SRO)	K/A System/Event	
T2/G3	005K2.03	2.7*/2.8*	Residual Heat Removal	

K/A Statement condition

K2-Knowledge of bus power supplies to the following: (CFR 41.7)

K/A Statement

K2.03-RCS pressure boundary motor-operated valves

Reference

E417, E2890, XK100-18

Provided Reference

NONE

Objective

0340040101A01

Objective Statement

INITIATE RCS FLOW THROUGH THE RHR SYSTEM GIVEN AN RHR SYSTEM STARTUP IN ACCORDANCE WITH N-RHR-34.

Explanation

RHR-1B and RHR-2B are powered from MCC-62B Ext. and would be closed in these conditions. RHR-11 is powered from MCC-52B. RHR goes to a common header after the loop suction. Option A is incorrect due to the RHR-1B and RHR-2B power supply. Option C is incorrect due to power supply for RHR-11. Option D is incorrect because of the common header, although operation of RHR Pump B from the Loop A suction is not common practice.

Comments

Validated 5/15

Wednesday, April 18, 2001