

ITEMS FOR PROPOSED EXAMINATION INCLUDING ES-401-9

FOR THE KEWAUNEE RETAKE EXAMINATION - NOV 2004

2004 Kewaunee RO Proposed Written Retake Exam Submittal 1 of 2

- Proposed Rev.8 Written Examination (g:\oldata\2004
Kewaunee Written Retake Exam\Original\04-09-08 Original
Proposed Exam)
- ES-401-7 Written Examination Quality Checklist

Facility:		Date of Exam:		Exam Level: RO/SRO		
Item Description				Initial		
				a	b*	c#
1.	Questions and answers technically accurate and applicable to facility			KEH	DFB	
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			KEH	DFB	
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401			N/A	N/A	
4.	Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process					
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input checked="" type="checkbox"/> the examinations were developed independently; or <input type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)			KEH	DFB	
6.	Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank	Modified	New	KEH	DFB
			64	36		
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory	CIA		KEH	DFB
		40	60			
8.	References/handouts provided do not give away answers			KEH	DFB	
9.	Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the Tier to which they are assigned; deviations are justified			KEH	DFB	
10.	Question psychometric quality and format meet ES, Appendix B, guidelines			KEH	DFB	
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet			KEH	DFB	
a. Author		Printed Name / Signature			Date	
b. Facility Reviewer (*)		KEITH E. HAMPTON / Keith E. Hampton			7/21/04	
c. NRC Chief Examiner (#)		David I. Fitzwater Jr. / [Signature]			7-21-04	
d. NRC Regional Supervisor						
Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.						

2004 Kewaunee RO Proposed Written Retake Exam Submittal 2 of 2

- Licensee Letter Transmitting Proposed Exam to NRC
- Proposed Rev.9 Written Examination (g:\oldata\2004 Kewaunee Written Retake Exam\Second\04-10-28 Second Proposed Exam)
- ES-401-6 Written Examination Quality Checklist
- ES-401-9 Written Exam Review Worksheet with written exam comments



October 15, 2004

NRC-04-121
10CFR 55.40

Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
Attn: Mr. Dell McNeil
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

Kewaunee Nuclear Power Plant
Docket 50-305
License No. DPR-43

Reactor Operator Written Examination Materials for Mr. Jason F. Crowley

In accordance with the guidelines NUREG 1021, "Operating License Examination Standard for Power Reactors" Draft Revision 9, we are providing you with the Reactor Operator written examination materials for the re-examination of Mr. Jason Crowley, scheduled for the week of November 15, 2004. This package contains the 75-question written examination, the reference material supporting the distracters, and Form ES-401-6. Also included are the updated checklist, outlines, and record of rejected K/As (Forms ES-201-2, ES-401-2, ES-401-3 and ES-401-4).

NUREG 1021 physical security requirements state that the enclosed examination materials shall be withheld from public disclosure until after the examination is complete.

Please direct any questions or comments regarding this material to Mr. Stephen Johnson at 920-388-8723.

Thomas Coutu
Site Vice President, Kewaunee Nuclear Power Plant
Nuclear Management Company, LLC

Enclosures (7)

cc: Senior Resident Inspector, Kewaunee, USNRC w/o enclosures

Facility: Kewaunee Nuclear Power Plant		Date of Exam: 11/15/2004		Exam Level: RO/SRO		
Item Description	Initial			a	b*	c*
	a	b*	c*			
1. Questions and answers technically accurate and applicable to facility	KGH	WAG	MGB			
2. a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	KGH	WAG	MGB			
3. RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401	N/A	N/A	N/A			
4. Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process			MGB			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input checked="" type="checkbox"/> the examinations were developed independently; or <input type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)	KGH	WAG	MGB			
6. Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual RO / SRO-only question distribution(s) at right	Bank	Modified	New	KGH	WAG	MGB
	281 -	71 -	401 -			
7. Between 50 and 60 percent of the questions on the RO exam (including 10 new questions) are written at the comprehension/analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right	Memory	CIA		KGH	WAG	MGB
	33 [#] - 34	42 [#] - 41				
8. References/handouts provided do not give away answers	KGH	WAG	MGB			
9. Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the Tier to which they are assigned; deviations are justified	KGH	WAG	MGB			
10. Question psychometric quality and format meet ES, Appendix B, guidelines	KGH	WAG	MGB			
11. The exam contains 400; the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet	KGH	WAG	MGB			
a. Author	Printed Name / Signature KEITH E. HAMPTON / Keith E. Hampton			Date 10/15/04		
b. Facility Reviewer (*)	WYATT A. GODES / Wyatt A. Godes			10/15/04		
c. NRC Chief Examiner (#)	MICHAEL E. BIELBY / Michael E. Bielby Sr			10/28/04		
d. NRC Regional Supervisor	RS Linksburg / RS Linksburg			11/10/04		
Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.						

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	F	1-0				x										New. 1) Distractors C and D are not plausible that the RPIs would be impacted by changing the rod bank movement position. 2) The K/A importance values should be 4.0/3.7 instead of 4.1/3.9. Suggest changing "would" to "could." Provided reference does not support correct answer - this is the case for >50% of the questions. A supplemental submittal was provided to update the references.
2	H	2-0				x										New. 1) Distractor B is not plausible in that one would not reduce turbine load to compensate for a rise in reactor power. Change to "increase turbine load . . ." 2) Distractor A is not plausible in that one would not dilute to restore original rod position. To make the distractors symmetric, change to: "Reduce turbine load to compensate for the decrease in reactor power."

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. 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?
7. 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. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Backward	Q= K/A	SRO Only			
3	H	1.0				x							✓		U	New. 1) Distractors A and G are not plausible (that a failure low of a Th or Tc channel would affect rod control). Also, these two failures are both related to a Tave channel failing low, and so are not independent distractors (i.e., if one knows that distractor A is not the correct answer, then one should know that distractor G is also not the correct answer). 2) This question is also related to Question #2 in that if one knows that distractor D is the correct answer in Question #2, then one also knows that distractor B is not the correct answer here.
4	H	1.0				x							✓		U	New. There is only one plausible answer to this question.
1 5	H	2.0											✓		E	Modified. 1) To make distractor B, C, and D more plausible, change the initial conditions so that the reactor power is less than the P-8 set point (e.g., state that the reactor is critical at 10 ⁸ amps). <i>Changed initial power level to make distractors more plausible.</i>
2	H	3.0							☞				✓		S	New.
3 6	F H	3.0											✓		U	New. Question is a memory question. (Normal alt-dilute positions/loss of air failure positions) <i>Station agrees, reclassified as fundamental.</i>
4 7	F	2.0											✓		E	New. Change distractor C to state: "to maintain conductivity within required limits." <i>Enhancement made.</i>
5 8	H	2.5											✓		E	Bank. 1) It appears distractor D should be listed as the correct answer. <i>Distractor D incorrectly listed as correct answer – fixed.</i>
6 9	H	2.0											✓		E	Modified. 1) Distractor B is not plausible (that having a different RCP running would affect the mixing of the RCS). Change distractor to say to commence a normal boration per the normal boration procedure to add negative reactivity. 2) Distractor C says to start the "B" train RHR and secure "A" train RHR to re-establish pre-event conditions. However, the initial conditions do not state that the RHR trains were swapped. <i>Question reviewed, changes made to correct distractors.</i>
7 10	H	2.0											✓		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			
44	H	1.0											✓		U	Modified. 1) In the question stem, change "Flow to "Flow." 2) In the question stem, fully capitalize the word "INITIAL." <i>Question rewritten.</i>
8 42	H	2.0											✓		U	Modified. Does not appear to have a correct answer as written. <i>Question re-written.</i>
	H	2.0				x									S	Resubmitted Question Review: New.
9 43	F	1.0											✓		U	New. <i>Question re-written</i>
	F	3.0													S	Resubmitted Question Review: New.
10 44	F	2.0						x					✓		E U	Bank. Distractor B could also be considered correct, since running an RCP does continue to maintain a two phase mixture level above the break longer (since stopping RCPs would cause the two phase mixture to settle out into separate phases for the liquid and the steam, and would cause level in the liquid phase to decrease below that of the two phase level). <i>Distractor B was acceptable, but revised to ensure not correct.</i>
11 45	H	2.5											✓		S	Bank.
46	H	4.0				x							✓		U	New. 1) Distractors B and D are not plausible (that pressurizer level drops or rises, since the question stem states that the pressurizer level program is failed to 50%. 2) With a Tave increase as reactor power increases, distractor A is easily dismissed as an incorrect answer.
12 47	H	1.0											✓		U	Modified. Required to know from memory or is there a hand-out? This is a direct lookup from the Table that was supplied. <i>Question re-written.</i>
	H	2.0													S	Resubmitted Question Review: 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			
13-18	H	1.0				x							✓		U	Bank. 1) Distractors A and B are not plausible (that the CS pumps would be OFF during a large break LOCA. 2) Distractor C is also correct, since the RHR pumps will be running for a large break LOCA.
	H	2.0													E	Resubmitted Question Review: New. Add the term "required" to "... status of the ECCS pumps..." in the stem.
14-19	H	2.0											✓		E	Bank. To make distractor C more plausible, change distractor C from P-7 to p-13. <i>Enhancement incorporated.</i>
15-20	F	2.0											✓		E	Modified. 1) Delete the work "major" in the question stem, this word implies that a Safety Injection has occurred. <i>Deleted "major" from stem.</i>
16-21	H	2.0				x							✓		U	Modified. 1) Distractors C and D are not plausible, since there is no reason a PZR PORV would open on a low PZR pressure condition.
	H	2.0													S	Resubmitted Question Review: New.
17-22	H	2.5											✓		S	Bank.
23	H	2.5											✓		E	New:
24	F	1.0											✓		U	New:
25	H	2.0				x							✓		U	Modified. Grammar is incorrect in the stem. 1) Distractors A and B are not plausible for the failure high of a PZR level channel.
26	H	1.0											✓		U	Modified. Q = K/A. The K/A is associated with the thermodynamic relationship between RGS loops and S/Gs resulting from unbalanced RGS flow, whereas the question only requires on the know that an RGP trip when at greater than 10% power will cause a reactor trip.
27	F	1.0				x							✓		U	New. 2) Distractors A, B, and D are not plausible. Each distractor should have 2 parameters. For example, SG pressure could be added to distractor A. SG level could be added to distractor B, etc.

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		
18 28	F	1.0												U	New. The correct answer is the only one with the stem-provided valve number and description (pressure control). Modify distractors. <i>Question rewritten.</i>
	F	2.0												S	Resubmitted Question Review: New.
19 29	F	1.0												U	New.
	F	2.0												S	Resubmitted Question Review: New.
30	F	2.0				x								U	New. 1) Q ≠ K/A. The K/A is associated with automatic containment isolation causes/features, whereas the question is associated with the automatic equipment operation resulting from a Safety Injection. 2) Distractors A & B are not plausible (that certain Containment Fan Coils would be off following a Safety Injection).
34	F	1.0				x	x							U	New. 1) the question stem does not state the initial plant conditions. Thus, if RGS pressure is initially less than 2244 psig, one could argue that distractor A could also be correct (per step 4.1.2.4 of procedure E-GVG-35, which allows using an SI pump to inject boric acid from the RWST to the RGS). Distractors B & D are not plausible, since they both would require a boric acid pump to be available.
20 32	F	1.0				x								U	Modified. 1) Distractors A & D are not plausible. The status of the upper internals would not be expected to result in cavitation (this results in discarding distractors A and D). 2) Distractor B is not plausible, since there is no mention of recirculation flow and with RCS temperature at 118°F, one would not expect steam binding of the RHR pump.
	H	2.5												S	Resubmitted Question Review: 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			
21 33	H	1.0											✓		U	New. This answer comes from a simple math calculation. The only knowledge required is that the CS pumps actuate at 23 psig.
	H	2.0													E	Resubmitted Question Review: New. Distractor D has no time frame associated with it similar to the other distractors/answer, add "Immediately, but only when the..." Licensee incorporated change.
33	H	1.0											✓		U	New. This answer comes from a simple math calculation. The only knowledge required is that the CS pumps actuate at 23 psig.
22 34	H	1.0											✓		E U	Modified. Not higher skill. Material is memorized. 1) Distractors A and C are not plausible (that the CC water pump would run without interruption or not restart until off-site power is restored). 2) Could distractor D also be correct? What would prevent the auto start of the CC water pump on low discharge pressure? <i>Material is not required to be memorized, distractor d. is not correct with an SI, distractor c. is ok, however, reworked all distractors.</i>
	H	3.0				x									S	Resubmitted Question Review: Modified.
23 35	H	2.0											✓		U	Bank. Q ≠ K/A. K/A asks for actions contained in EOP for PZR PCS malfunction. This Q only talks of tripping bi-stables. Question is not comprehension, only memory.
	H	2.0													S	Resubmitted Question Review: New.
24 36	F	2.0											✓		S	New.
25 37	F	2.5											✓		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			
38	F	2.5				*							✓		U	Modified. Question requires higher skill to answer - not memory. acuates is spelled incorrectly in distractor b. 1) Distractor D is not plausible since the operators should know that there is no rod withdrawal block associated with the source range channels. 2) Distractor B is not plausible, that both source range channels would de-energize with loss of control power to one of them.
26 39	F	2.0											✓		S	Bank.
27 40	H F	2.5											✓		U	New. Question requires higher skill to answer - not memory. <i>Changed to higher skill.</i>
28 41	F H	2.5											✓		U	New. Question is memory. <i>Changed to fundamental.</i>
29 42	H H	1.0 3.0											✓		U S	Modified. In the question stem, to increase the question difficulty, state the beginning and final main steamline pressures instead of the temperatures (thus requiring the use of steam tables to determine a heatup rate). Identify an RCS cooldown of 80°F (say from 520°F to 440°F) and make distractor D the correct answer. Resubmitted Question Review: Bank.
30 43	H H	2.5 3.0											✓		U S	New. EOP transition decisions are made by SROs. This question is an SRO level question. Distractor D could also be considered correct, since the question stem does not state whether or not SI termination is in progress. If SI termination is in progress, then distractor D is the correct answer. Resubmitted Question Review: New. EOP procedure transition is an SRO not RO function. Question requires recognition of EOP entry conditions for E-2 which is an RO function. Will change "Transition" term to "Enter" on answer A and distractor B.

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			
44	F	2.0											✓		U	New. Not fundamental unless taught this way in the classroom. 1) The correct answer depends on the initial Control Bank D rod position. If Control Bank D is near or above the automatic rod withdrawal limit, then distractor D is the correct answer instead of distractor G. 2) Distractor D is not plausible since there is no reason that reactor power would drop. Change the second part of the distractor to: reactor power remains at 80%.
45	F	2.0											✓		S	New.
31 45	F	2.0											✓		S	New.
32 46	H	2.5											✓		S	New.
33 47	H H	1.0 3.0											✓		U S	Modified. Resubmitted Question Review: New.
34 48	F H	2.0											✓		U	Bank. Memory question, not higher. The importance factors for the RO/SRO should be 4.3/4.6 (not 4.6/4.3). Distractor D is not plausible that a void would cause a loss of PZR level. Delete "and subsequent loss of Pressurizer level." Re-classified as memory level, other change requests incorporated.
48	F H	2.0											✓		U	Modified. Memory question, not higher. The importance factors for the RO/SRO should be 4.3/4.6 (not 4.6/4.3). Distractor D is not plausible that a void would cause a loss of PZR level. Delete "and subsequent loss of Pressurizer level." Re-classified as memory level, other change requests incorporated.
49	H	4.0				*							✓		U	Modified. Distractors A and B are not plausible (to have a rising megawatt output with a loss of condenser air ejectors).

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			
35 50	F	1.0											✓		U	Modified. Q ≠ K/A. The K/A is associated with the principle of cooling by natural convection, whereas the question is only related to the allowable cooldown rate during natural circulation. <i>Question rewritten.</i>
	H	2.0													S	Resubmitted Question Review: New.
50	F	1.0											✓		U	Modified. Q ≠ K/A. The K/A is associated with the principle of cooling by natural convection, whereas the question is only related to the allowable cooldown rate during natural circulation.
	H	2.0											✓		S	Modified. Could a Rapid Power Reduction be required (and thus distractor D also be correct) due to not enough condensate pumps running (since Condensate Pump 'A' is tripped)? <i>Distractor d was not correct, however, modified stem to ensure d plausible, but false. Question rewritten.</i>
36 54	H	2.0											✓		S	Modified. Could a Rapid Power Reduction be required (and thus distractor D also be correct) due to not enough condensate pumps running (since Condensate Pump 'A' is tripped)? <i>Distractor d was not correct, however, modified stem to ensure d plausible, but false. Question rewritten.</i>
	H	2.0											✓		S	Resubmitted Question Review: Bank.
37 52	H	1.0				x							✓		U	Modified. Not higher skill - memory. Distractors A, B, and D are not plausible (that the FW Pumps would have an autostart feature or that the Unit could remain at 45% power with no FW pump running).
	H	2.0											✓		S	Resubmitted Question Review: New.
38 53	F	1.0											✓		U	New.
	H	2.0											✓		S	Resubmitted Question Review: New.
53	F	1.0											✓		U	New.
54	H	1.0				x							✓		U	Modified. occured is spelled occurred. The operators should know that rad monitor R-19 causes a SG blowdown isolation on high alarm. The other distractors are not plausible. One could also include the other auto actions associated with R-19 on high alarm to increase the level of difficulty. This question is a memory question, not higher. The question only asks what auto actions occur on R-19 high radiation.

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			
39 55	H	1.0				x							✓		U	Modified. Distractors B and D are not plausible (that by throttling open (closed) a discharge valve that the discharge pressure would increase (decrease)).
	F	1.0													U	Resubmitted Question Review: Bank. Low level of difficulty, not discriminating. Question used previously, meets the specified KA, and is fundamental. However, licensee replaced KA and question.
40 56	F	1.0											✓		U	Modified.
	H	3.0													S	Resubmitted Question Review: New.
41 57	H	1.0											✓		U	Modified. This question is a Tech Spec Bases question and thus is at the SRO level per 10CFR55.43(b)(2). Not higher skill - memorization.
	H F	2.0													U	Resubmitted Question Review: New. Question is fundamental not higher, ie, application of requirement to trip AFW pumps based on two parameter conditions. Licensee agreed. Cognitive level changed to fundamental.
58	F	1.0											✓		U	Modified. Q = K/A. The K/A is concerns automatic actions associated with the Area Radiation Monitoring System, however, the question is associated with automatic actuations associated with the Process Radiation Monitoring System. Distractor B is the lone distractor with the word "containment" in the rad monitor description.
42 59	H	1.0				x							✓		U	Modified. Distractors B, C, and D are not plausible.
	H	2.5													S	Resubmitted Question Review: New.
43 60	H	2.0											✓		S	Bank.
44 64	H	3.0											✓		S	Bank.

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			
45 62	F	2.0											✓		S	Bank.
46 63	H	2.0								☞			✓		S	New. Distractor D is not plausible (that the voltage low alarm would be caused by the Remote/Local being in Local).
47	F	2.0								☞			✓		S	Resubmitted Question Review: New.
64	H F	2.0											✓		U	Modified. Q = K/A. The K/A is associated with remote manual loaders and loss of instrument air, however, the correct answer is not associated with remote manual loaders for the instrument air system. In the question stem, correct the typo "Annunciator". Also add the word "alarms" at the end of the same sentence. Procedure E-AS-01, "Loss of Instrument Air," says to trip the reactor if instrument air header pressure is less than 60 psig. However, the question stem only says that service air pressure is 58 psig. This question should be classified at the higher cognitive level instead of at the memory level, since one needs to look at two pieces of information (the annunciator alarm and station air pressure) to determine the correct answer. <i>Changed K/A with chief permission to keep question (065AK303), agreed it was higher cognitive level.</i>
65	F	4.0											✓		U	Modified:
48 66	F	2.0											✓		E	Modified. To make distractor A more plausible, change to "Manually start at least one AFW pump."
49 67	F	2.0											✓		S	New
50 68	F	2.0								☞			✓		E U	New. The definition of REFUELING OPERATIONS in the Tech Specs includes the statement, "...when the vessel head is unbolted or removed." To meet this definition, the second bullet in the question stem must be changed to state that the Reactor Vessel Head has been unbolted or removed. Otherwise, the Tech Spec 30 minute time requirement does not apply and there is no correct answer.
51 69	F	2.0											✓		E	Bank. Re-arrange the rad monitors in numerical order. <i>Enhancement incorporated.</i>

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			
69	F	2.0											✓		E	Bank. Re-arrange the rad monitors in numerical order. <i>Enhancement incorporated.</i>
70	H	2.0											✓		U	Modified. Q ≠ K/A. The K/A is associated with a malfunction of a Process Rad Monitor and its effect on the Waste Disposal System, whereas the Q is associated with a malfunction of the Waste Disposal System and its effect on the Process Rad Monitor System.
52 74	H F	2.5											✓		U	Bank. Not memory - some comprehension & analysis is done. <i>Agree. Q changed to higher cognitive level.</i>
72	F	2.0											✓		U	Modified. Q ≠ K/A. The K/A is associated with a knowledge of annunciator alarms for the Area Rad Monitor system, while the question appears to be associated with an alarm for the Process Rad Monitor System. The distractors should not have conditional statements (as the correct answer, Distractor C does). Instead, any conditional statements should be in the question stem.
53 73	F F	2.0 2.0											✓		S U S	Modified. Q ≠ K/A. The K/A is associated with a knowledge of annunciator alarms for the Process Rad Monitor System, while the question is associated with an alarm for the Area Rad Monitor System. <i>Station uses an ARM in the PRM - question correct as written. Question replaced.</i> Resubmitted Question Review: New.
74	H	1.0											✓		U	Modified. Change "a imminent" to "an imminent."
54 75	H	2.0											✓		S	Bank.
55	H	2.0											✓		S	Bank.
56 76	F	2.0											✓		E	New. Delete the first sentence, capture the valve numbers in the stem. The first sentence states the valves are supplied by a safety-related bus. <i>Enhancements incorporated.</i>
57 77	F	2.0											✓		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			
58 78	F	1.0													U	Modified. For clarity in the question stem, add the following words after "fully isolated": "from the instrument air system." To make distractor A more plausible, change to 75 psig. Then re-arrange distractors in top down numerical order.
	F	2.0													S	Resubmitted Question Review: Modified. NRC comments were incorporated.
79	H	2.0													U	New. Not RO. Procedure change determinations are for the SRO.
59 80	H F	2.0													U	Modified. 1) This question should be classified at the Higher cognitive level instead of at the memory level, since one needs to look at three pieces of information (containment pressure and the status of Containment isolation and the MSIVs) to determine the correct answer. 2) There is not enough information supplied to verify that it takes 2 of 2 containment isolation pushbuttons depressed to actuate containment isolation. 3) to make the incorrect distractors more plausible, change the question stem to have containment pressure at 15 psig instead of 5 psig. 4) To make distractor A more plausible, change the second part of distractor A to be like the second part of distractor D (i.e., "and do NOT close the MSIVs). <i>Reclassified at higher cognitive level.</i> Resubmitted Question Review: Modified. Item 3) stem pressure changed to 12 vice 15? Item 4) no change to distractor A? <i>The recommended change to Item 3) was modified based on the trip range; the recommended Item 4) was not made because it would have made distractor A a correct answer.</i>
	H	2.0													S	
60 84	F	2.0													U	New. 1) Distractor C is not plausible. To make the distractor more plausible, delete "until a safety evaluation can be performed." 2) Distractor D is not plausible, since the LCO entered may not have anything to do with core operating limits. 3) To make distractor B more plausible, change the "six hours" to "two hours."
	F	2.5				x									S	Resubmitted Question Review: New. NRC comments incorporated.

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			
61 82	F H	2.0													U	New. 1) This question should be classified at the memory level instead of at the Higher cognitive level, since the question is only associated with knowledge of shift turnover requirements. 2) To increase the level of difficulty, change the first condition in the question stem from "Walk the Control Boards" (which everyone should know is a requirement) to "Review Boric Acid Heat Tracing for alarms."
	F	2.0											✓		S	Resubmitted Question Review: New.
62 83	H	2.5											✓		S	Bank.
63 84	F H	1.0													U	Modified. Not higher. 1) Distractor A is not plausible (the procedure may not need field data taken and may not have Data Sheets). 2) Distractors C and D are not plausible (initials in the body of the procedure would generally have nothing to do with Acceptance Criteria. <i>Reclassified at higher cognitive level.</i>
	F	2.0				x							✓		S	Resubmitted Question Review: New.
64 85	H	2.0											✓		S	New. Distractor D could also be considered correct, depending on who is performing the action and who is the concurrent verifier. Acceptable as is, however, <i>modified to ensure distractor d was plausible, but incorrect.</i>
86	F	2.0				x							✓		U	New. 1) Distractors B and d are not plausible (that reactor vessel temperature would need to be less than RT_{HDV}). Distractors B and D could be similar to distractors A and C, except using 120% instead of 110%.
65 87	H	3.0											✓		E	Bank. In distractors A, B, and D, change the "should" to a "shall". <i>Enhancement incorporated.</i>
66 88	F	2.0					x						✓		S	Bank.

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			
67 89	F F	2.0 1-0 2.0				x							✓		E U S	Modified. Distractors B and C are not plausible. Determined difficulty level 2.0 after discussion. <i>Distractor c. was plausible. Reclassified as Enhancement, distractor b. reworked.</i> Resubmitted Question Review: Bank.
68 90	H	2.0											✓		E	Bank. Distractor C is not plausible to go to FR-S.1 for an ATWS on a loss of all AC power. <i>Distractor c. was reworked.</i>
69 94	H	2.0											✓		E	Bank. Change distractor A to have a dropped rod instead of a misaligned rod. In distractor D, add the word "ONLY" at the beginning. <i>Enhancements incorporated.</i>
92	H	1-0											✓		U	Modified.
93	H	2.5											✓		U	New. Not RO responsibility. SRO makes transition determinations. Change "should" to "shall" in the question stem. Distractors A and C are basically the same. Need to change one of them. In distractor D, delete the "IF RGS is NOT intact" and the "determine if the S/G's are a heat sink/source".
94	H	1-0					x						✓		U	Modified. All the distractors could be considered correct. For example, distractor B is correct because action 3 does result in a drop in EGGS flow to the RGS (even though action 4 does not result in a drop in EGGS flow). There is at least one action in each distractor that would result in a drop in EGGS flow to the RGS. The importance factors for the RO/SRO should be 3-6/3-8 (not 3-4/40).
70 95	F H F	2.0 2.0				x							✓		U S	Modified. Not higher cognitive level, distractors A and D are not plausible. <i>Reclassified at fundamental skill level.</i> Resubmitted Question Review: Bank.
71 96	H	2.5											✓		S	Bank.

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			
72 97	F	2.0				x							✓		U	Bank. Distractor B is not plausible. Change the second part of the distractor to "prior to isolating the SI pumps." Distractor C is not plausible. Change to: "To determine if the SI accumulators can be isolated to allow depressurization of the RCS." <i>Incorporated suggested changes.</i>
73 98	H	2.5											✓		U	Modified. This question is at the SRO level (assessment of facility conditions and selection of appropriate procedures). Distractor C is not plausible (to lower the RCS cooldown rate). Change to: "Maintain the present cooldown rate and transition to FR-1.3, "Response to Voids in the Reactor Vessel," if a void in the reactor vessel upper head is detected."
	F	2.0													S	Resubmitted Question Review: New.
74 99	H	2.5											✓		U	Modified. Not RO responsibility. SRO reads graph, makes this decision. Need to see the Kewaunee ECA-1.1 to see if the procedure allows local throttling of SI pump flow (since this action is not generic to the WOG—generically one throttles flow by the starting/stopping of ECCS pumps).
	H	3.0													S	Resubmitted Question Review: Bank. Flowrates for B, C, and D are changed. Licensee referenced lesson plant learning objective RO4-04-LP022.002 to support question as an RO responsibility.
75 400	F H	2.0											✓		U	Bank. Not a higher cognitive level question. Memory only. Distractor B is not plausible (that SG blowdown could not be used if t_{hot} was above 540°F). <i>Reclassified at the memory level, modified distractor b.</i>

☞ Resubmitted questions as part of Rev.9, 75 question RO written retake exam.