

Q#	1. LOK (F/H)		2. LOD (1-5)		3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.		7. Explanation
					Stem Focus	Cues	T/F	Cred. Dist.	Partial Link	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	
1*	F		2					E	E					S		E	<p>Distractor B is not plausible. Drywell temp or pressure would not impact reactor vessel head integrity. Distractor C Drywell temp does impact RPV level instrumentation during a LOCA. The reference provided does not verify that distractor D is the correct answer. Why isn't C a correct answer?</p> <p>The word integrity is used in the stem. Therefore instrument level integrity would be an incorrect answer. The EPG itself is to protect the primary containment integrity.</p> <p>Distractor B was changed from reactor vessel head to reactor vessel flange.</p> <p>SAT</p>
2*	F		2	E										S		E	<p>The reference refers to a cycling SRV necessary to take the actions listed in the correct distractor. There is no discussion of a cycling SRV in the stem.</p> <p>Stem was edited to include a reference to ERV cycling.</p> <p>SAT</p>
3*	F		2	E				E						S		E	<p>What about procedure approval? Distractor C is implausible.</p> <p>Stem will be edited to include an <u>approved</u> procedure.</p> <p>Stem was edited to refer to an approved procedure. After discussion with licensee Distractor C was considered plausible because now all four groups mentioned in the stem were represented in the distractors. SAT</p>
4*	H		3											S		S	
5*	F		2					U						S		S	<p>New Distractors A is not plausible and C is implausible unless there is an existing alternate verification method which was not included in the reference.</p> <p>Per the Ops rep peer check is an acceptable method for non-safety related OOS work. There is an existing alternate verification method.</p> <p>SAT</p>
6*	F		2											S		S	Modified

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 Link	Job-Link	Minutia #/units	Back-ward	Q=K/A	SRO Only			
7*	F		2										S		E		Why is Distractor D wrong?
																	Licensee edited stem to include the words per the UFSAR to make D incorrect.
																	SAT

#### 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).
- 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).**

\* Indicates question was one of the first 30 reviewed.

**ALL questions received independent verification of indicated references.**

**ALL questions received independent K/A review.**

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
8	H*	4									S	S		<p><b>Per the reference Distractor A not B is the correct answer.</b></p> <p>Distractors C and D are implausible. Level of difficulty is low because a lack of knowledge of the auto close feature still results in a correct answer. Question doesn't meet K/A which asks about relationship between drywell pressure and injection mode while the question requires knowledge about the relationship between drywell pressure and spray mode.</p> <p>The examiner misread the licensee's explanation notes. B is the correct answer. Question matches K/A because the applicant needs to know injection system logic in order to answer the question correctly. C and D are plausible because of the impact of the 316 switches in the system logic. SAT</p>
9	H*	3					S				S	S		<b>New</b>
10	F*	2									S	S		
11	H*	4									S	S		<p>Licensee description says this question has a difficulty level of 5 which is not allowed change to 4. Reference provided does not verify that the answer is correct.</p> <p>Licensee provided reference the answer is SAT.</p>
12	H	4									S	S		<b>New</b>
13	H	4									S	S		<p>Reference material was insufficient to verify the correct answer.</p> <p>Licensee provided references the answer is SAT.</p>

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.	
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
14	H	4	E									S		E	<p>The correct answer states that Busses 21 and 23 will have to be re-energized locally from their alternate feed. Per the reference DOA 6900-02 on page 11 of 4 Caution under Step D.9.a if a scram has already occurred ... then bus transfer should not be attempted. The stem states that the plant was manually scrambled.</p> <p>Licensee edited stem to state that the plant has stabilized. This makes the answer correct. The licensee also edited two of the distractors to change the tense to match the wording in the question stem. SAT</p>
15	H	3										S		E	<p>The correct answer states that a rod block will be generated if the refueling platform is moved over the reactor vessel. The reference provided states that the platform has to be over the core <u>and</u> the fuel grapple, frame hoist, or trolley hoist has to be loaded. The stem says the main hoist is loaded does this mean the fuel grapple is loaded? Does the mode switch pass through shutdown between refuel and startup? This will give a rod block also but will it lock in?. This is double jeopardy question since DAN 902-5 C-3 is used as a reference twice in this examination.</p> <p>Licensee edited main hoist to fuel grapple in stem and distractor A. Switch will not pass through shutdown. Not double jeopardy because one question is about refuel interlocks and question 97 requires knowledge of RMCS. SAT</p>
16	H	3				S						S		S	<p># Licensee has a difficulty level of 3, but this only requires knowledge of Group 1 isolation set point. Distractor D is implausible because the stem does not say anything about a downscale APRM.</p> <p>The question is not memory level that makes it not a level 1 question. Licensee states that the applicant must have the knowledge that the APRMs are not downscale with IRMs at range 10. The examiner excepted this answer the question is SAT.</p>
17	H	2										S		S	
18	H	4										S		S	<b>New</b>

Q#	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.	
	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
19	F	2										S		S	The reference material provided was insufficient to verify the correct answer.
															Licensee provided reference material the answer is SAT.
20	F	4										S	S	S	The K/A (2.1.33) is tied to 10 CFR 55.43 and not 41 need RO learning objective for this to be an RO question.
															Licensee provided learning objective and link to 10 CFR 55.41. SAT
21	F	2										S	S	S	The K/A (2.2.34) is tied to 10 CFR 55.43 and not 41 need RO learning objective for this to be an RO question. The reference provided is insufficient to verify the answer is correct.
															Licensee provided learning objective and link to 10 CFR 55.41. The licensee provided sufficient reference the answer is SAT.
22	H	5	U									S	S	U	<b>New</b> There is no correct answer to this problem. The stem says you have NOT been briefed. The reference procedure states that emergency personnel are to be briefed <u>before</u> the fact of possible health risks. The K/A (2.3.4) is tied to 10 CFR 55.43 and not 41 need RO learning objective for this to be an RO question.
															The licensee changed the question and provided a learning objective and a link to 10 CFR 55.41. SAT
23	H	3										S		S	The reference material provided was insufficient to verify the correct answer.
															Licensee provided adequate reference material SAT.
24	F	4										S		S	
25	F	3										S		S	<b>New</b>
26	H	3										S		S	

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
27	H	3									S		S	<b>New</b> The reference material provided is insufficient to verify the correct answer. DOP 1200-01 page 4 of 34 does not list a low pressure trip. No information that PCV will fail closed on loss of air.  Licensee provided adequate reference material. SAT
28	F	3									S		S	The reference material provided is insufficient to verify the correct answer. There is no reference material for what causes or is caused by the RPIS SYS INOP annunciator. There is no reference material that supports that the rod will be deselected upon completion of the movement.  The licensee provided sufficient reference material. SAT

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
29	H	3									S		S	<b>New</b> Do you get full Torus spray flow with only one LPCI pump running? Can 250 gpm really be achieved in 2 seconds what is the basis for this?  Licensee changed the stem to read when will the pump restart instead of when will 250 gpm be achieved. SAT
30	H	3									S		S	<b>Modified</b> Reference material provided does not state how loss of IA impacts the expansion tank fill valve.  The licensee provided sufficient reference material. SAT

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	
31	H	3									S	S	Licensee lists this question as modified but it is a bank question based on no significant modification to the stem. There is insufficient information in the reference material provided to verify the correct answer. The reference material lists the trips but provides no verification as to which trip would be the first to actuate.
													The reference material provided stated that the IAC would trip on high air temp after a loss of TBCCW. SAT
32	H	3									S	S	Reference material provided does not verify that the DG trips normally bypassed during LOCA signal will be bypassed when the DG is started locally.
													Licensee provided sufficient reference material to verify the correct answer. SAT
33	F	3									S	S	<b>New</b>
34	F	2									S	S	
35	H	4									S	S	
36	F	3									S	S	
37	F	3									S	S	
38	H	3									S	S	
39	H	4	E								S	E	The stem says period is 20 seconds. DAN 902-5 E-4 says the set point for the alarm is <20 seconds. Actions to drive rods won't happen unless alarm goes off.
													License changed stem to 19 seconds to match reference material. SAT
40*	H	4									S	S	Reference provided is insufficient to verify the answer is correct. Won't a partial break allow it to be <u>effective</u> for spray also?
													The licensee provided reference material to show that sufficient spray flow was required to ensure adequate spray cooling. With the leak indication it can't be ensured that adequate spray flow is available. SAT
41*	H	3									S	S	<b>New</b>

1.		2.		3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.		7.	
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation		
42*	F	3										S		S	Reference provided is insufficient to ensure the answer is correct.  Licensee provided adequate reference material. SAT		

1.		2.		3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.		7.	
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation		
43*	H	3										S		S			
44*	F	3										S		S			
45*	F	2										S		S	New		
46*	F	2										S		S	New		
47*	H	3										S		S			
48*	F	1				E	U					S		U	Question is basic knowledge level. Distractors B isnot plausible. Distractor D is also correct since RPV level decreases due to steam flow reduction which causes voids to collapse.  Licensee changed stem to read a turbine trip from 40 percent instead of 100 percent. Because bypass valves can handle this change in steam flow distractor D is no longer correct. SAT		
49	H	5				E						S		S	New		
50	H	5										S		S	Modified.		
51	F	3										S		U	Reference material provided is insufficient to verify the answer. Why isn't Distractor C a correct answer?  Licensee changed question 51 due to potential for double jeopardy with question 87 that gave a level of 5.5 feet in the torus in the stem. SAT		



Q#	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.	
	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
52	H	3				U						S		U	Examiner disagrees with licensee's conclusion that this is a fundamental level question. Distractors C and D are implausible. It is not necessary to lower reactor water level to isolate RWCU or trip Recirc pumps.  Licensee edited distractors C and D such that it did not indicate that it was necessary to lower water level to trip recirc pumps or isolate the RWCU. SAT
53	F	3										S		S	
54	H	3										S		S	
55	H	2	??									S		S	<b>New</b> Why 40 seconds? There is nothing in the reference material support the 40 second time frame. There is nothing in the reference material that confirms that the A train will trip on heater failure.  The licensee provided reference material to show that the A train will trip and the B train will start on an A train heater failure after a 20 second time delay. SAT
56	F	3										S		S	<b>New</b>
57	H	2										S		S	<b>New</b>
58	F	3										S		S	<b>New</b>
59	H	2		E								S		E	The isolation of the RBV and the start of SBGT are tied together. Change one of these distractors.  Licensee changed one of the distractors replaced SBGT with containment purge fans. SAT
60	F	2										S		S	

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
61	H	E			E						S	E		<p><b>New</b> Distractor B doesn't answer the question. Stem doesn't state whether SJAE or Vacuum pump is providing condenser vacuum. Distractor A can be correct if vacuum pump is running. Reference material provided doesn't verify that one train of SDC is lost. Why isn't distractor D correct?</p> <p>Changed stem from 330 to 290. This disallows the use of the bypass valves if the vacuum pump was running. Licensee provided reference that C SDC pump is lost on loss of 23-1. Distractor D is incorrect because blowdown does not go to radwaste. SAT</p>

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
62	F	3									S	S		<p>References provided are insufficient to verify the correct answer. DEOP 300-2 is provided but the entry conditions are removed so the reference to the "alert" level cannot be verified.</p> <p>Licensee provided reference answer is SAT.</p>
63	H	3									S	S		
64	H	3									S	S		
65	F	3									S	S		
66	H	3									S	S		<p><b>New</b> Why are distractors A&amp; D wrong? They appear to be the same as B.</p> <p>Depressurizing does not stop the inventory loss nor does it prevent discharging energy to the secondary containment. SAT</p>
67	H	3									S	S		

Q#	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.	
	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
68	H	4										S		S	<p>The reference material does not provide a set point at which power is transferred from the inverter to Bus 25. The DAN has no automatic actions at 126 volts.</p> <p>The licensee provided reference material to show that the power supply will swap. The DAN should show that in the automatic actions but does not. Licensee will rev the DAN after the exam. SAT.</p>
69	H	1		U								S		U	<p><b>New</b> Answer to this question is in the provided references in table on DEOP 300-1</p> <p>The licensee removed the answers from the references provided to the applicants. SAT</p>
70	F	2										S		S	<p><b>New</b></p>
71	H	3										S		S	<p>References provided are insufficient to verify the answer is correct.</p> <p>Licensee provided sufficient reference to verify the answer was correct. SAT</p>
72	F	3										S		S	
73	H	4										S		S	
74	H	3										S		S	<p>The K/A is not tied to 10 CFR 50.41 or 43. Cannot verify the answer is correct with the reference material supplied.</p> <p>Licensee provided RO objective. Licensee provided sufficient reference material to verify answer. SAT</p>
75	H	3										S		S	<p>Modified.</p>
76	H	2				U						S	S	S	<p>Reference material supplied in insufficient to verify the answer to this question.</p> <p>Licensee provided sufficient reference material. SAT</p>
77	H	2		U								S	S	U	<p>Not stated whether new or bank question. The answer to the question is in the reference supplied to the applicant.</p> <p>Changed out question. New question SAT.</p>

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
78	H	2									S	S	S	
79	H	3									S	S	S	Disagree with the licensee's conclusion that this is a modified question. At least one distractor was not modified.
														Licensee changed to Bank
80	H	3									S	S	S	

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Form ES-401-9

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
81	H	4									S	S	S	
82	F	3									S	S	S	New
83	F	3									S	S	S	New
84	H	3									S	S	S	New
85	F	2									S	S	S	
86	F	5									S	S	S	New
87	F	3									S	S	S	New
88	H	2									S	S	S	Modified
89	H	3				E					S	S	E	New Distractor A is implausible. Why would only one pump trip?
														Licensee changed distractor A from 2A to 2C. SAT
90*	H	4									S	S	S	New
91*	H	3				S					S	S	S	New Distractor B, No needs to be capitalized to match Distractor A.
														Licensee made the edit.
92*	H	3									S	S	S	New

	1.	2.	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
93*	H	4									S	S	S	<p><b>New</b> How do you reach this answer with info given in the stem? Question comments state reactor water level is above -35 inches. Where is this info? Per step 8 of DEOP 400-5 with water level above -35 then terminate and prevent all flow. Per reference given DOA 0600-01 if a total termination is desired then prevent using <u>Manual method</u>. This conflicts with the answer given.</p> <p>Licensee provided reference material to show that operators are trained to bring water level down to -35 inches to use the automatic method. There is no reason for the applicant to think that water level is below -35 inches. SAT</p>
94*	H	1		U							S	S	U	<p>The answer is contained in the reference material provided to the applicant.</p> <p>Licensee changed question. SAT</p>
95*	H	5									S	S	S	<b>New</b>
96*	F	3									S	S	S	
97*	H	3									S	S	S	<b>New</b>
98*	H	3									S	S	S	
99*	H	2									S	S	E	<p>The stem states that efforts to restore flow within the first minute are unsuccessful this is a cue that the short term scram vs the longer term plant shutdown will be used. This then reduces the choices to two. Reference supplied was inadequate to verify the correct answer.</p> <p>The licensee edited the stem to make this question acceptable. SAT</p>
100*	H	2									S	S	S	<p>Distractor A is an implausible distractor.</p> <p>Licensee stated that ALL validators picked A as the correct answer. Agreed changed this answer to another distractor. SAT</p>

Note: The initial submittal written exam file in Adams will have a date later than the final as given exam file because the electronic version of the initial exam file did not contain an answer key. This was not discovered until preparing the files for inclusion into ADAMS. The licensee updated the file with an answer key which changed the file date.