

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
1	H	2												B	S	
2	F	3												B	E	<p><u>NRC</u>: The exam has too many LOK = H questions.</p> <p><u>LIC</u>: Changes made following phone communication on 2/13/2018: This question was modified to remove information from the stem of the question and just focus on EDG system response to a loss of Offsite Power when running in parallel with Offsite Power. LOK is F because it tests fundamental system response.</p>
3	F	3												N	E	<p><u>NRC</u>: Need a 10CFR55 reference in the pedigree. Why is "C" incorrect if MSIV closure is "possible"?</p> <p><u>LIC</u>: Updated explanation for distractor C to include why the MSIVs would not close under the conditions given in the stem of the questions. Made a link to 10CFR55.41 (b) (7). Added objective link.</p>
4	F	2												B	S	<p>2x3 format</p> <p><u>LIC</u>: Added objective link.</p>

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 (easy) to 5 (difficult); questions with a difficulty between 2 and 4 are acceptable.
- Check the appropriate box if a psychometric flaw is identified:
  - § "Stem Focus": The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
  - § "Cues": The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length).
  - § "T/F": The answer choices are a collection of unrelated true/false statements.
  - § "Cred. Dist": The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
  - § "Partial": One or more distractors 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:
  - § "Job Link": 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).
  - § "Minutia": 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).
  - § "#/Units": The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
  - § "Backward": The question requires reverse logic or application compared to the job requirements.
- Check questions that are sampled for conformance with the approved K/A and those that are designated "SRO-only." (K/A and license-level mismatches are unacceptable).
- Enter question source: (B)ank, (M)odified, or (N)ew. Verify that (M)odified questions meet criteria of ES-401 Section D.2.f.
- Based on the reviewer's judgment, is the question, as written, (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
- At a minimum, explain any "U" status ratings (e.g., how the Appendix B psychometric attributes are not being met).

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5	F	1												N	U	<p><u>NRC</u>: Scram setpoints are too easily recognized (LOD=1). It would be more discriminating to have the applicant recognize an indirect scram. Accepted MSIV closure as replacement.</p> <p><u>LIC</u>: Changed correct answer to state "3 Main Steam Isolation Valves close". This change was made as requested by the NRC chief examiner so that the correct answer was not a readily identifiable RPS scram setpoint. Answer Explanation updated to reflect new correct answer. Due to change in length of answer, the correct answer is NOW C, instead of A as originally submitted. Distractor explanations changed to match new distractor order. Made objective link.</p>
6	H	3												N	S	
7	H	2												B	S	
8	H	3												B	S	2x2 format
9	H	3												M	E	<p><u>NRC</u>: How was this question modified? Need to see the original question. Also, since "5" is in all choices, the question can be simplified further.</p> <p><u>LIC</u>: Informed NRC where to locate original question in the submittal folder. Original question number is: EQ-OP-802-2001-000-0003-012</p> <p>Modified stem to bring information from Line Item 5 up to the stem of the question (simplified the distractors by moving common information to the stem). Removed line item 5 from the list of numbered actions (previous line item 6 is now line item 5). Removed previous item 5 from all distractors and correct answer. Modified answer explanation accordingly.</p>
10	H	3												B	S	2013 NRC LOR Exam question
11	F	2												N	S	
12	H	3												B	S	2x2 format; NRC 2015 ILO Exam question
13	H	4	X							X				B	U	<p>NRC 2009 ILO Exam - Reference Provided</p> <p><u>NRC</u>: Stem-focus issue with "after all required alignments are made". Could be interpreted as automatic actions or manual operator actions. No parameter value trends are provided, as consistent with other questions. Question also requires the applicant to know the DWSIL curve without a reference. Is this RO level knowledge? If the applicant can determine A is incorrect, C also becomes incorrect.</p> <p><u>LIC</u>: Changed middle part of question stem to the following: "After the LNO takes the expected manual actions for the above conditions, which one of the following reflects the expected containment response?"</p> <p>Trends added to bulleted parameter list to be consistent with other questions.</p>

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																Added DWSIL Curve to list of references to be provided. Corrected Distractor C so that it cannot be answered from information in Distractor A.
14	H	3												B	S	
15	H	2				X								B	E	2x2 format <u>NRC</u> : Reference 29.101.01 Sh 2 is provided rather than 29.101.01 Sh 3. Correct reference as appropriate and provide an explanation of the answer and distractors. Finally, justify why 50 PSIG is plausible (not too low). <u>LIC</u> : Verified that correct reference is 29.100.01, Sheet 3. This reference can be found in the submittal files in a folder titled "Common References." Improved Answer Explanation by explaining how the incorrect responses are plausible due to candidates' knowledge of the Decay Heat Removal Pressure (DHRP) at Fermi 2. Defined DHRP in Answer Explanation. Added objective link.
16	F	2												N	E	<u>NRC</u> early review question <u>NRC</u> : Please explain LCO entry w.r.t SR 3.3.4.1.3 allowable value. <u>LIC</u> : Added reference of the TRM to show instruments as INOP per TRM and therefore the channels are INOP so LCO entry is required.
17	H	3	X			X					X			N	U	<u>NRC</u> : The stem is confusing – the answer focuses on when the screen is automatically displayed, not when it's NOT required to take manual action to view it. It is asked negatively (backward logic). Also, why would only one RPS train be chosen as the correct answer? <u>LIC</u> : Rephrased stem of question to the positive to remove confusing working (backward logic). Because of this, all distractors and explanations were changed as well. Added objective link.
18	F	2												B	S	
19	F	3												N	S	
20	F	2												N	E	2x2 format <u>NRC</u> : Please correct distractor C typo. <u>LIC</u> : Corrected Distractor C typo in the Distractor Explanation.
21	F	2		X		X								N	U	<u>NRC</u> : Only "C" mentions the condenser, and clearly stands out from the other possibilities <u>LIC</u> : Changed question, based on input by Chief Examiner, as follows: <ul style="list-style-type: none"> <li>Rewrote question to ask about "symptoms" of AOP entry.</li> <li>Removed all alarms (ARPs) from answer and distractors.</li> </ul>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																<ul style="list-style-type: none"> <li>Changed correct answer to "Decreasing Main Generator Megawatts."</li> <li>Changed answer and distractor explanations accordingly.</li> </ul>
22	H	3												N	S	
23	H	4												N	S	<p><u>NRC</u>: Is there an associated RO-level learning objective for this topic? (Generic)</p> <p><u>LIC</u>: Objective link added.</p>
24	F	2												N	E	<p><u>NRC</u>: Specify "29.100.01 Sheet 5, Secondary Containment and Rad Release" rather than "EOPs on Secondary Containment Exhaust High Radiation".</p> <p><u>LIC</u>: Changed stem of question to specify 29.100.01, Sheet 5, Secondary Containment Control per recommendation of Chief Examiner. Added objective links.</p>
25	F	3												N	E	<p><u>NRC</u>: Do any ventilation systems <u>currently</u> have fans with modulating blade pitches? Is "B" a plausible distractor?</p> <p><u>LIC</u>: After discussion with Chief Examiner, the question was kept as-is. Added a note to Distractor for B that 2 (of 4) validators chose Distractor B, which lends to its plausibility.</p>
26	H	1												N	U	<p><u>NRC</u>: Question was too easy and does not require licensed operator knowledge to answer the question <u>correctly</u>.</p> <p><u>LIC</u>: Completely re-wrote question. Changed to a leak from the HPCI system water side. Changed question source from Bank (B) to New (N).</p>
27	H	3								X				N	E	<p><u>NRC</u>: Distractor B should include "Oxygen" after the 3.5%, to maintain consistency.</p> <p><u>LIC</u>: Corrected Distractor B to include Oxygen after 3.5%.</p>
28	H	4												M	S	<p><u>NRC</u>: How was this question modified? Need to see the original question to verify.</p> <p><u>LIC</u>: Original question is in the Submittal folder. Its title is EQ-OP-315-000-A021-003.</p>
29	H	2												N	E	<p><u>NRC</u>: Is there an associated RO-level learning objective for this topic? (Generic)</p> <p><u>LIC</u>: Objective link added.</p>
30	H	3												M	S	<p><u>NRC</u> early review question</p> <p><u>NRC</u>: Explain why this question considered to be modified.</p> <p><u>LIC</u>: Original question is in the submittal folder. Its title is EQ-OP-315-0139-000-C005-003. The stem was modified by removing the words and adding a picture of the HPCI system on the H11-P602 panel thus requiring the students to evaluate the system lineup to determine that it is aligned to the Torus, where previously this information was provided to the candidate. Each of the distractors were also modified, to remove reference to the HPCI suction alignment, since the candidates now need to discern this from the drawing in the stem because of this change.</p>

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31	H	3												N	E	2x2 format <u>LIC</u> : Question asked during exam administration - Are A&C CMCs in RUN because of Surveillance or in Auto for Surveillance? <u>Result</u> : After conferring with the chief examiner, the following was added to the stem of the question: running for "Division 1 Core Spray System Pump and Valve Operability Test." <u>NRC</u> : The CE was contacted and concurred on the clarification/enhancement to be conveyed to all applicants.
32	H	3												B	S	2x2 format
33	H	3												M	S	<u>NRC</u> : How was this question modified? Need to see the original question. <u>LIC</u> : Original question is in the submittal folder. Its title is EQ-OP-315-0127-000-0005-004
34	H	2												B	S	
35	H	3												N	S	2x2 format <u>NRC</u> : Since the 2 <sup>nd</sup> part of the question addresses TS Operability, explain why this would be an RO-level question. <u>LIC</u> : This information, in addition to being a TS requirement, is also a requirement of the Reactor Startup GOP (General Operating Procedure) that the RO uses when performing a Reactor Startup, specifically GOP Step 22.000.02, Step 5.2.7.
36	H	3												N	S	
37	H	3												B	S	2x2 format
38	H	3												B	S	2x2 format
39	H	3	X											B	E	<u>NRC</u> : In the question stem, the phrase "with all equipment in service" seems unnecessary. At 100% power, the applicants are supposed to assume normal equipment lineup and operation unless otherwise stated. <u>LIC</u> : Revised question to remove phrase "with all equipment in service."
40	F	2												N	S	
41	H	3												N	S	
42	H	3				X								B	E	2x2 format <u>NRC</u> : Phrase Loss of Offsite Power (LOP) in a consistent manner as used in prior questions. Distractor A is not plausible (Div. 1 DC loads are de-energized). <u>LIC</u> : Corrected phrasing for Loss of Offsite Power. Per request of chief examiner, the first part of Distractor A was changed to read "Div.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																1 Chargers supplying Div. 1 DC loads." Because of this, Distractor B also had to change. Distractor Explanations were updated accordingly. <u>LIC</u> : Question asked during exam administration - Is the question stating that it is a loss of ALL Offsite Power? <u>Result</u> : After conferring with the chief examiner, informed candidates that the question is referring to a loss of ALL Offsite Power. <u>NRC</u> : The CE was contacted and concurred on the clarification/enhancement to be conveyed to all applicants.
43	H	3												B	S	
44	F	2												B	S	
45	F	3												B	S	2x2 format
46	H	3				X								N	U	<u>NRC</u> : PSE-N480B lowering is implausible, eliminating 2 distractors. <u>LIC</u> : Based on recommendations from the chief examiner during onsite validation week, the question stem was changed to focus on the impact of lowering downstream air pressure due to clogging of the filters shown in the stem. The distractors were changed to complete the following statement: Downstream pressure will lower, and when that pressure reaches _____. Distractors now read: A. 95 psig, Stby SAC starts. B. 85 psig, P5000-F401 closes. C. 85 psig Div 2 CAC starts with P5000-F441 open (note: distractor largely remained unchanged) D. 75 psig P5000-F441 closes and Div 2 CAC starts (note: distractor largely remained unchanged). These changes allowed for the 2 implausible distractors (A and B) to be removed. Answer explanations were changed for Distractors A and B accordingly. Changes made following phone conversation on 2/13/2018: Corrected Distractor A Explanation (from 75 psig to 95psig).
47	F	2				X								N	S	2x2 format <u>NRC</u> : Closing the "P42" valve to maintain pressure is implausible, eliminating 2 distractors. <u>LIC</u> : Upon review and discussion during onsite validation, the distractors were accepted as plausible because of other system pressure control devices in the plant (main turbine lube oil, Hydrogen Seal Oil D/P control) that do have valves which would close upon start of a standby pump. Explanations for Distractors B and D were revised to include plausibility because of these other system responses.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
48	H	3												N	S	
49	H	3												N	S	
50	F	2												N	E	<p><u>NRC</u>: Distractor A is not plausible.</p> <p><u>LIC</u>: Upon further review and discussion during onsite validation, Distractor A was determined to be plausible because of the similarity between the HPCI and RCIC systems and the fact that the method described in Distractor A would trip the RCIC turbine. Removed capitalization from the word KEEP in the stem of the question.</p>
51	H	3												N	S	
52	F	2												N	S	<p><u>NRC</u>: Minutia? Matches K/A -.is this required to be known from memory?</p> <p><u>LIC</u>: During onsite validation review, this question was determined to meet the K/A and is also an RO objective required to be known from memory.</p>
53	F	3												N	E	<p><u>NRC</u>: LOK = H for this question. The exam has too many LOK = H questions.</p> <p><u>LIC</u>: Changed LOK to High initially. Changes were then made following phone communication on 2/13/2018 - This question was modified to remove the initial pressure instrument failure that was present prior to the transient. Now, with only 1 instrument malfunction that occurs after the transient, the candidate must complete fewer mental steps to determine RPS system response. LOK is now F because it tests fundamental system response.</p>
54	F	3												N	S	
55	H	2												N	S	2x2 format
56	F	3	X	X										N	E	<p>Provided Reference</p> <p><u>NRC</u>: Should distractor A have withdrawal terminology similar to distractors C and D? Should answer choice B have terminology for rod motion (i.e. Insert (IE) and Withdrawal (WE)) clarified as in distractors C and D? Also, a SE occurs in 3 distractors, which leads me to believe one would be generated. Consider pulling it (SE) up into the stem, and then focus the distractors on its impact.</p> <p><u>LIC</u>: During review and discussion during onsite validation, the examiners comments and questions were addressed as follows: The only changes that were made was to add Withdrawal Error (WE) and Insert Error (IE) to C and D so that is consistent with A and B, Select Error (SE). It was decided to NOT move SE up into the stem since the question requires the candidate to determine if a SE will occur and since one distractor implies that a SE will not occur.</p>
57	F	3												B	S	<p><u>NRC</u>: Distractor C is not plausible.</p> <p><u>LIC</u>: Upon review with Chief Examiner, it was determined that the question will stay</p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
																	as written. Two licensed operators (out of 4) picked distractor C during validation, which lends to its plausibility.
58	F	3				X								N	E		<u>NRC</u> : Distractor C is not plausible due to the automatic action of the shear valve. <u>LIC</u> : Per the chief examiners recommendation, the 2 <sup>nd</sup> half of Distractor C was enhanced to read "The Ball Valve can be manually actuated to establish containment integrity" to remove the implausible portion of the distractor regarding automatic operation of the Shear Valve. Changed distractor explanation accordingly.
59	H	3	X											N	E		<u>NRC</u> : In the question stem, the phrase "with all equipment in service" is not necessary. At 100% power, the applicants are supposed to assume normal equipment lineup and operation unless otherwise stated. <u>LIC</u> : Removed phrase "all equipment in service" from the stem of the question.
60	H	3												N	E		<u>NRC</u> : Each distractor should show <u>both</u> 803 and 804 indicators for clarity. <u>LIC</u> : Modified question to include both the 803 and 804 indicators for the correct answer and each distractor. Added some clarifying information to the Answer and Distractor explanations to support the added indications.
61	F	1						X						B	U		<u>NRC</u> : Question is too easy and does not require licensed operator knowledge to answer <u>correctly</u> . <u>LIC</u> : Based on review with chief examiner, it was decided to change to Generic K/A G.1.28. A bank question was picked (EQ-OP-315-000-A008-001) that matches this K/A. This question was used on the 2003 ILO exam. Concurrence was obtained from the chief examiner to use the new K/A and question. Source of question was changed to B. Question pedigree was brought up to current standards.
62	F	3												N	S		
63	H	3	X											B	E		<u>NRC</u> : How is offsite power present after a station blackout event? What caused the 120kV offsite circuit to become available post-transient? <u>LIC</u> : During onsite validation, this was explained to the chief examiner. The chief examiner asked that amplifying information be added to the answer explanation. Therefore, the following Note was added to the Answer Explanation: At Fermi 2, the Station Blackout procedure has a unique situation that differentiates it from other stations. At Fermi 2, it is possible to be in the Station Blackout procedure but still have power available at Bus 1-2. If this is the case, power can be restored to the SBFW pumps as specified in the correct answer.
64	H	3												N	S		
65	H	3												N	S		



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66	H	3												M	S	NRC 2015 ILO Exam (M)
67	H	3												N	S	Provided Reference
68	F	2												N	E	<u>NRC</u> : For distractor choice B, does the indicator noun name read out in "indicators" or should that be shortened to "Ind" as with distractors A and B? Or should they <u>all</u> be spelled out? <u>LIC</u> : Spelled out indicators, and added (s) for multiple indicators, as appropriate per examiner feedback.
69	F	2												N	E	<u>NRC</u> : Is there an associated RO-level learning objective for this topic? (Generic) <u>LIC</u> : Objective Link has been made.
70	F	2				X		X				X		N	U	<u>NRC</u> : How was this question modified? Need to see the original question. Question does not require licensed operator level of knowledge to answer and does not match the K/A to "determine the expected plant configuration." Distractors A and B are not plausible. <u>LIC</u> : Original question and this question were too far off (too many changes made to call it a Modified question). Changed Question Status to NEW. Rewrote question based on feedback provided from the chief examiner. Distractor explanations changed accordingly.
71	F	2												B	E	<u>NRC</u> : LOK is H for this question. Also, since it is a Bank question, please provide data the LOD is <u>not</u> too low. <u>LIC</u> : Disagree that question is LOK High (H). Validation stats for this question were 100% (4 of 4) and, during validation, Licensed Operators rated it at an LOD 2. This is because the ability to answer the question relies upon recognizing that RB Pressure is above the TS allowable value (memory level) and recalling the less than 1 hour TS action (also memory level). Requiring 2 memory level items on one question keeps it above LOD 1, and recommended an LOD 2, and LOK Low, based on being memory level knowledge.
72	H	3												N	E	<u>NRC</u> : LOK is H for this question. <u>LIC</u> : Changed LOK to H.
73	F	2												N	S	
74	F	2												B	S	2x2 format
75	H	3												B	S	NRC early review question; 2X2 Format; provided reference
															8/75 = 10.66% Flawed Questions <u>before</u> post-exam comments were considered	
76	H	3												B	S	

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77	F	2				X								B	E	<p><u>NRC</u>: Include procedure titles in answer choices (23.623 and 23.106). How is disarming the control rod IAW 23.106 a plausible distractor based on the stem of the question (not referenced in 20.000.21 or 29.ESP.03)? Answer choice A could be interpreted as a correct answer also, since this is the action to be taken if the control rod does not settle back to 00 after the rod insertion attempt. Question is acceptable with the incorporated changes.</p> <p><u>LIC</u>: Answer A accepted as incorrect by examiner after discussion during prep week. Enhancements incorporated.</p>
78	H	4												N	S	<p><u>NRC</u>: Why wouldn't answer choice A also be correct? The defeat/override switch referenced in NOTE 1 of 20.129.01 could be used to allow F403 to be opened.</p> <p><u>LIC</u>: Answer A accepted as incorrect by examiner after discussion on NOTE 1 during prep week. Added further explanation, for Distractor A, to emphasize that the keylock switch does NOT override the lower pressure isolation defeat of the F403 that occurs when NIAS header pressure goes below 80psig (to protect the integrity of Div 2 NIAS).</p>
79	H	3												M	E	<p>2x2 format</p> <p><u>NRC</u>: How was this question modified? Need to see the original question. Format drywell parameters in stem similarly (i.e. start with the recorder EPN followed by the noun name) for consistency. Correct typo in Distractor Explanation also. Question Acceptable with the incorporated changes.</p> <p><u>LIC</u>: Original bank question provided during prep week. Format and typo corrected.</p>
80	H	2												N	S	<p>NRC early review question; 2X2 Format; provided reference</p> <p><u>NRC</u>: Providing TS 3.6.2.1 as a reference causes 2 of the distractors become direct lookup. Also, distractor C (2) format should match D (2) – "preserve."</p> <p><u>LIC</u>: TS 3.6.2.1 <u>not</u> provided as handout.</p>
81	H	3												B	S	
82	H	2	X											N	E	<p><u>NRC</u>: The stem states that HPCI is being used to maintain RPV water level, but there is nothing in the stem to indicate that it is REQUIRED to maintain RPV water level; therefore, two correct answers. Correct stem as required. Facility agreed to revise stem to indicate that a fuel failure occurred and to include that the HPCI room temperature is rising indicating a possible leak. Question Acceptable with the incorporated changes</p> <p><u>LIC</u>: Stem corrected as required.</p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
83	H	2												N	E	<p>NRC early review question; "2X3" Format</p> <p><u>NRC:</u> Parts 1 and 2 are RO level knowledge. The ability to determine whether or not RPS has tripped is also RO level of knowledge. The question does not require the examinee to assess whether or not an ATWS has occurred, as this is given by the stem ("CRS directs...FSQ1-8"). Answering Part 3 can be accomplished by RO level knowledge that RPS is not tripped and there defeating automatic trips is unnecessary. Further discussion and explanation is required. Question Acceptable with the incorporated changes.</p> <p><u>LIC:</u> Updated stem with: Based on this the CRS would observe the reactor operator (removed P603 operator) When FSQ1-8 is complete TRIP SYSTEM A/B indicate. Based on this, the CRS will direct __ (3) __. Question reviewed and accepted by examiner during onsite validation week.</p>
84	H	4	X											B	E	<p>NRC 2009, 2015 &amp; 2017 LOR Exams</p> <p><u>NRC:</u> How is RPV pressure increasing in this scenario? How is this question operationally valid? Does a learning objective exist requiring SROs to have the STPLL curve memorized since the curve is not provided? Question Acceptable with the incorporated changes.</p> <p><u>LIC:</u> Following discussion with examiners, the stem was enhanced with: Reactor Pressure is 600 psig and rising. MSIVs are closed. Question accepted by examiner (as an Enhancement) as operationally valid after discussion on prep week. Learning objective corrected.</p>
85	F	2												B	E	<p><u>NRC:</u> Combine the 1<sup>st</sup> and 2<sup>nd</sup> sentences of the stem into one statement and deleting the phrases "which one of the following?" and "is REQUIRED." Question Acceptable with the incorporated changes.</p> <p><u>LIC:</u> Question was enhanced, by changing the stem of the question to read: During the execution of 29.100.01 Sheet 5, Secondary Containment and Radiation Release, the operability of equipment required to perform a safe shutdown is assured by performing an Emergency Depressurization for which of the following conditions?"</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
86	H	3					X						X	B	U	<p>2012 Exam</p> <p><u>NRC:</u> Differentiate which SOP in which the RHR Pump would be started in accordance with, if "per the SOP" is necessary. Also, show how the question was modified by providing the original question. Question can be answered using RO level of knowledge. Specific knowledge of AOP/EOP actions is not required. No information is provided in the stem to indicate that an automatic isolation has occurred. Eliminates Answer Choices B and D. RO would know that opening the Min Flow valve would drain water from the RPV to the Torus. Eliminates Answer Choice C. Only one choice left! Question Acceptable with the incorporated changes.</p> <p><u>LIC:</u> Replaced with Bank question that the original modified question was created from per direction from examiner.</p>
87	H	3												N	E	<p>NRC early review question</p> <p><u>NRC:</u> This question can be answered with RO Level knowledge. System knowledge that pneumatic supplies to ADS valves have accumulators. General knowledge of EOP for Emergency Depressurization. Question Acceptable with the incorporated changes.</p> <p><u>LIC:</u> Changed Div. 1 Drywell Pneumatics to Drywell Pneumatic supply header is depressurized due to a rupture. Question accepted as SRO-Only with enhancement.</p>
88	H	3												N	E	<p>Provided Reference, NRC early review question</p> <p><u>NRC:</u> Right-hand column of SRV lift pressures should have "#" instead of "X" as a heading.</p> <p><u>LIC:</u> Correction incorporated.</p> <p><u>LIC:</u> Question asked during exam administration - What MODE is the plant in?</p> <p><u>Result:</u> After conferring with the chief examiner, the candidates were informed that the plant is in MODE 1.</p> <p><u>NRC:</u> The CE was contacted and concurred on the clarification/enhancement to be conveyed to all applicants.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
89	H	3	X											M	E	<p>Provided Reference</p> <p><u>NRC</u>: Correct column formatting for parameters given in the stem. For consistency, the stem should state "the plant is operating at 100% power." The stem does not state whether or not the battery parameters were of the pilot cell or other cells (and the surveillance is not provided). How was this question modified? Need to see the original question.</p> <p><u>LIC</u>: Enhancement incorporated. Examiner accepts TS call based on conversion during prep week.</p> <p><u>NRC</u>: Upon further review, please change choice 'A' to include the Required Actions for both TS 3.8.6 Conditions A and B. Replace "Cond" with "Action"</p> <p>For choice 'D' (and 'A' if the above change is incorporated) combine the TS 3.8.6 actions into one line (T.S 3.8.6 Actions A.1, A.2, A.3, and B.1)</p> <p><u>LIC</u>: Agreed to make changes.</p> <p><u>NRC</u>: Question Acceptable with the incorporated changes. <b>Add "T.S." to Dist. C.</b></p>
90	H	3												N	E	<p>Provided Reference, 2x2 format</p> <p><u>NRC</u>: Why do the TS and Bases necessary to be provided? By providing the TS and bases, part 2 of the question becomes direct lookup and is LOD 1. By emphasizing the alarms for each EDG, part 1 of the question is LOD 1 and requires no real licensed operator knowledge to answer. Formatting on alarm panel picture needs corrected, part is cut off by the margins. Where is the KEY? Question Acceptable with the incorporated changes.</p> <p><u>LIC</u>:</p> <p>Upon review with examiners during onsite validation week, because the EDG is a different EDG, AND it is in another division, the TS interpretation requires more mental steps and is therefore NOT LOD 1. Chief examiner recommended that this be changed from Unsat (U) to Enhancement (E).</p> <p>Removed Basis of TS from handout. Added key to format. Fixed format as requested.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
91	H	2				X							X	M	E	<p>2x2 format</p> <p><u>NRC</u>: How was this question modified? Need to see the original question. Question is not SRO Only. Question can be answered using only RO system knowledge.</p> <ol style="list-style-type: none"> <li>Knowledge that Limiter 1 affects only on the pump associated with the not full open discharge valve; i.e., the North Pump in this case. This knowledge eliminates Answer Choices A and C (Part 1)</li> <li>Knowledge that the North pump will trip when its discharge valve is not full open, eliminates Answer Choice D (part 2)</li> <li>Answer Choice B remains as the only possible answer.</li> </ol> <p>Question deemed acceptable with the incorporated changes below.</p> <p><u>LIC</u>: During review with examiner, it was determined that question is SRO Only. Examiner enhancements to make distractors all appear similar were incorporated as follows:</p> <ul style="list-style-type: none"> <li>Bulletized the part (2) of A and D so that they more closely match the format of B and C.</li> <li>Removed the bullets for placing the 2/3 Defeat Switch in DEFEAT from B and C so that the number of bullets in all responses are similar</li> </ul> <p>Question was accepted as SRO-Only by examiner with enhancement</p>
92	H	2												N	E	<p>Provided Reference (<u>not</u> in explanation), NRC early review question</p> <p><u>NRC</u>: Is it necessary to provide the basis for this LCO? Please provide a more detailed distractor analysis. Question Acceptable with the incorporated changes.</p> <p><u>LIC</u>: Removed TS basis from handouts per examiner. Enhanced distractor analysis.</p>
93	H	4												N	E	<p>NRC early review question; 2X2 Format</p> <p><u>NRC</u>: Remove the formula from the answer explanation; it does not seem to provide any valuable information. May also want to provide an explanation as to why the isolation of one main steam line at full power does not cause a SCRAM on high pressure, high flux, or Group 1 isolation on high steam flow in the other steam lines. Question Acceptable with the incorporated changes.</p> <p><u>LIC</u>: Incorporated stated enhancements. Emphasized the word "slow" at the recommendation of the examiner.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
94	H	2												B	E	<p>Provided Reference, NRC early review question</p> <p><u>NRC:</u> Is any reference material provided? If not, how is K/A met? If so, specify in the question pedigree. It is unnecessary to provide all of 29.100.01 Sh 3A. Provide only Table 8. The table could be embedded within the question. Question Acceptable with the incorporated changes.</p> <p><u>LIC:</u> Reference material provided for the question. Only providing Table 8 of 29.100.01, Sheet 3A, per examiner direction.</p>
95	F	2											X	B	E	<p><u>NRC:</u> Question does not test the K/A. The requirement to have a Reactivity Management SRO, while administrative, is unrelated to temporary management directives. Answer explanation needs to be revised to be consistent with the wording in MOP19 Step 4.3. Also the "Distracter Explanation" referencing Step 5.4.2 of MOP19-100 is misquoted. The distracters are examples of reactivity changes that do not require a maneuvering plan (&lt;10% power change using Recirc Flow). 5.3.2 Requires that a RMSRO specifies when a RMSRO should be stationed. Step 5.6.1 defines Significant Reactivity Maneuvers as &gt; 5%. Licensee incorporated the changes to the answer explanation. Question Acceptable with the incorporated changes.</p> <p><u>LIC:</u> Wrong K/A was listed on submitted exam key. Sample plan lists K/A 2.1.37 Knowledge of procedures, guidelines, or limitations associated with reactivity management. Accepted by examiner as K/A match. Enhancement provided for why each distracter is wrong. Direct reference on distracters was found in MOP19-100. Question now indicates this. Based on K/A match, question status was changed from Unsatisfactory (U) to Enhancement (E).</p>
96	F	2		X		X								N	U	<p>"3x3" format</p> <p><u>NRC:</u> On-shift operations personnel do not review work orders packages for scheduled number of hours or personnel during a work package review? This is not plausible and makes multiple distractors not plausible. Also, the second half of the first sentence; specifically the phrase "performed without any adverse impact on the plant" provides a cue to answering the question. "Work hours and number of test personnel to complete" do not impact the plant. Question Acceptable with the incorporated changes.</p> <p><u>LIC:</u> The following corrections were made as directed by the examiner during onsite validation:</p> <ul style="list-style-type: none"> <li>• Three Distractors were modified to remove "Work hours and number of test personnel to complete" and replaced with "Qualification of test personnel."</li> <li>• Removed the phrase "the review is to ensure that the surveillance test can be performed without any adverse impact on the plant" from the stem.</li> </ul> <p>Question now accepted by examiner with these changes.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
97	H	3												B	E	<p>Provided Reference – TS only be provided, 2x2 format</p> <p><u>NRC</u>: Formatting on columns in stem of question need corrected (lined up in columns). Answer explanation needs to state why the given parameters do not meet the TS LCO. Question Acceptable with the incorporated changes. Recommend inserting the core flow values for 70%, 10% and 5% of Rated Core Flow. Recommended change to answer explanation incorporated.</p> <p><u>LIC</u>: Enhancement to answer explanation provided. Provide TS only - NOT basis.</p>
98	F	2												B	S	2012 ILT Exam
99	F	3												B	S	2012 ILT Exam
100	H	3	X						X				N	M	E	<p>2012 ILT Exam, Provided Reference</p> <p><u>NRC</u>: Stem should reflect 100% power rather than “full power” for consistency throughout the exam. The question does not require any SRO specific knowledge or skill to answer the question, and the correct answer can be determined by identification/elimination of the wrong answers, rather than by specific recognition of the correct answer.</p> <ol style="list-style-type: none"> <li>Question requires the examinee to know whether or not a “Gross” fuel clad failure exists. Though not specifically stated in the AOP, the determination appears to be tied to the TS LCO 3.7.5 limit for Off-Gas activity release rate; a specific value not required to be memorized. Additionally, it could probably be assumed that “gross” fuel cladding failure does not exist by the absence of any other alarms</li> <li>To answer the question the applicant must first convert the rad monitor readings to release rates (a task tested by the original question from the 2012 <u>RO</u> written examination).</li> <li>Once the applicant concludes that a “gross” fuel failure does not exist, the applicant can dismiss answer choices C and D, since placing the Mode Switch in SHUTDOWN is an Immediate Action (RO level knowledge) for “gross” fuel cladding failures.</li> <li>Answer choice B is dismissed by the system level knowledge that the rad monitors cannot be reset while the readings are above the trip set-point.</li> </ol> <p><u>LIC</u>: Added graphic of recorder for Off Gas radiation levels. Accept remainder of question. Remove no other alarms as directed by examiner</p> <p><u>NRC</u>: Also, change the second part of Choice ‘D’ to “... and Main Steam Line Drains.</p> <p><u>LIC</u>: Made change to Choice D.</p> <p><u>NRC</u>: Question Acceptable with the incorporated changes.</p>



<b>RO TOTALS:</b>	B= 26 M= 5 N= 44	F= 31 H= 44	E= 24 U= 8	Additional Notes: N/A
<b>SRO TOTALS:</b>	B= 11 M= 4 N= 10	F= 6 H= 19	E= 17 U= 2	Additional Notes: Two "U" (8%)
<b><u>GENERAL COMMENTS:</u></b>				
<ol style="list-style-type: none"> <li>1. Bank questions are indicated by B; Modified are indicated by M; New questions are indicated by N</li> <li>2. Questions with references/attachments provided are identified in the COMMENTS.</li> </ol>				