

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (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 F	2												N	E S	<p><b>Reference provided.</b> An applicant who recalls from memory that AOP-264 step 2 requires that power be reduced to &lt;60% following the loss of one Recirc Pump can identify answer “A” without applying any of the provided references. This results in this question being at a fundamental LOK instead of being at the listed higher cognitive level (the LOD of the question is also lowered because of this). Additionally, the stem is unclear in that it does not specify a starting power level such as 100% or rated thermal power (it simply says “operating at power”). Furthermore, in order to reflect the change in plant conditions, the stem should state that “reactor power is <i>now</i> 63%”.</p> <p>Based upon the reduced Core Plate DP the student must determine the correct method of identifying core flow. Core plate DP must be used and therefore the outcome is different for just using the given core flow. This is then applied to answering the question and making the question challenging. The LOL should remain in the higher cognitive level as this mental hurdle needs to be completed to come to the conclusion.</p> <p>Made clarification to the stem and added the statement “reactor power is ...”</p>
2	F	4												N	S	Question is SAT as written.

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 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 (e.g., 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, and 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 the stem).
- Check the appropriate box if a job content flaw 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 K/As that are designated “SRO-only.” (K/A and license-level mismatches are unacceptable.)
- Enter question’s source: (B)ank, (M)odified, or (N)ew. Verify that (M)odified questions meet the criteria of Form 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).

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
3	F	2										X		N	U S	<p>This question does not match the associated K/A statement, specifically in that it does not require the applicant to determine/interpret battery voltage. Also, please verify that the correct answer is true,</p> <p>Minor revisions needed on replacement question (IAW AOP-3)</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
4	H	2					X							N	U S	<p>This question contains a subset flaw that results in distractor "A" becoming a second correct answer. Specifically, a condition in which both Recirc Pumps have tripped (as given in answer "C") is inclusive of the "B" Recirc Pump being in a tripped condition.</p> <p>Addressed the subset error by adding the word "ONLY" to answer choice B. This eliminates the choice as a correct answer.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
5	F	2												N	E S	<p>NUREG-1021 ES-401, section D.2.g, states that "...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect." The supplied distractor analysis does not explain the plausibility of each of the distractors.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
6	F	2										X		N	IMS	<p>This question does not match the associated K/A statement, specifically, it does not test knowledge associated with either control room abandonment or local control stations. Rather, this question is testing RCIC system knowledge in a more generic manner (<b>is the AUTO function available?</b>). Furthermore, the formatting of the stem is awkward; this first sentence should be reformatted in a manner similar to "given the following conditions:" with bulleted condition statements providing the information on plant conditions thereafter. Finally, the distractor analysis explanations do not appear to correspond to the distractor choices themselves</p> <p>OV: Question originally met KA, however enhancements made to question to address other issues, so the original question is to be considered in need of enhancement.</p> <p>Enhanced the question to meet the KA statement more holistically.</p> <p>During the OV validation, examiners determined the original question did meet the KA A Replacement question was proposed by the station and approved by onsite validation team. The replacement question was considered superior and was accepted by the onsite validators. The replacement question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
7	F	2				X								N	ES	<p>Distractor "B" is not plausible; there appears to be no procedural basis for adjusting CRD mini-purge flow to this value, thus making it unlikely that an applicant would have such a misconception. Additionally, NUREG-1021 ES-401, section D.2.g, states that "...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect." The supplied distractor analysis does not explain the plausibility of each of the distractors.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations. The answer explanation and plausibility statements show the acceptability of using the CRD Mini-Purge adjustment as a distractor.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
8	H	2				X								N	E S	<p>Distractors “C” and “D” are not plausible; there appears to be no procedural basis for performing either of the two listed actions, thus making it unlikely that an applicant would have such misconceptions. Additionally, NUREG-1021 ES-401, section D.2.g, states that “...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect.” The supplied distractor analysis does not explain the plausibility of each of the distractors.</p> <p>OV: Question originally had plausible distractors, however enhancements made to address the pedigree, so the original question is to be considered in need of enhancement.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p> <p>Plausibility statement now supports why distractor C and D are plausible and supported by station processes and procedures.</p>
9	H	3				X						X		N	U S	<p>This question does not match the associated K/A statement, specifically in that it does not require the applicant to determine/interpret reactor water heat-up/cool-down rate. Also, distractors A &amp; B are not plausible.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
10	H	2												N	E S	<p>NUREG-1021 ES-401, section D.2.g, states that “...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect.” The supplied distractor analysis does not explain the plausibility of each of the distractors.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
11	H	3												N	E S	<p>The stem contains a typo, specifically in that the word “follow” should instead be “follows”. Additionally, NUREG-1021 ES-401, section D.2.g, states that “...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect.” The supplied distractor analysis does not explain the plausibility of the torus hardened vent path aspect of distractor “D”.</p> <p>Typo in stem was corrected.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
1 2	H	3												N	E S	<p>NUREG-1021 ES-401, section D.2.g, states that "...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect." The supplied distractor analysis does not explain the plausibility of each of the distractors nor do the distractor analysis explanations appear to correspond to the distractor choices themselves.</p> <p>It was discovered by the station exam team that this question too closely matched a question later in the exam. Discussed this with the Chief Examiner and was given permission to reselect the KA within the same system. Reselected KA has been added to the 401-4 form.</p> <p>The question has been replaced due to KA reselection. Replacement question was reviewed by the chief examiner and accepted. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
1 3	F	2												N	E S	<p>NUREG-1021 ES-401, section D.2.g, states that "...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect." The supplied distractor analysis does not explain the plausibility of distractor "D".</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p> <p>Plausibility of distractor D is now supported by question pedigree information.</p>
1 4	H	2										X		N	U S	<p>This question does not match the associated K/A statement, specifically in that it does not test knowledge associated with alarms. Instead, this question tests knowledge of PCIS isolations.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
1 5	F	2												N	E S	<p>NUREG-1021 ES-401, section D.2.g, states that "...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect." The supplied distractor analysis does not explain the plausibility of the second halves of distractors "B" and "D". Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p> <p>Enhancements to question pedigree now provide sufficient support to the plausibility statements of choices "B and D".</p>
1 6	H	2		X										N	E S	<p>Answer "C" contains a cue (a specific determiner) due to being uniquely worded in comparison with the distractors. Specifically, answer "C" states that a certain annunciator <b>"was received"</b> based upon given plant conditions, whereas the distractors are worded in terms of "when" or "if" a certain annunciator <b>"is received"</b> based upon those same plant conditions. Additionally, this question contains a typo in distractor "D"; specifically, the word "receive" should instead be "received".</p> <p>OV: Question originally did not cue to a substantial degree, however enhancements made to question to address other issues, so the original question is to be considered in need of enhancement.</p> <p>It was determined that the original question did not cue to a substantial degree.</p> <p>Made corrections to the wording of the distractors and answer choices to remove any semblance of cueing. Typo in distractor D has been corrected.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
1 7	H	2												N	S	Question is SAT as written.
1 8	F	3												N	S	Question is SAT as written.
1 9	F	2												B	S	<p><b>Reference provided</b>  <b>Previous 2 NRC Exams (17-1)</b>            Question is SAT as written.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
20	FH	2					X							N	E	<p><b>Reference provided.</b> This question appears to contain multiple potentially correct answers due to the applicant being able to make an unstated assumption that is not contradicted by the stem. Specifically, while the voltage regulator is normally in automatic, it could also be in manual (a condition made even more plausible in the aftermath of the electrical transient described in the stem). It appears that this difference (if assumed) would alter the required operator actions and, therefore, the answer. Additionally, this question is written at a higher cognitive LOK (versus the listed fundamental level) because it requires the analysis of provided indications. Finally, the pedigree is not acceptable (<b>GENERIC</b>).</p> <p>OV: Question originally did not have multiple correct answers upon discussion however enhancements made to question to address other issues, so the original question is to be considered in need of enhancement.</p> <p>Onsite validation found that there were not multiple correct answers to the question.</p> <p>Wording in stem of the question was enhanced to ensure no other choice could be considered correct. Original question was sufficient; however, we more closely bounded the question to ensure there is no way of misinterpreting the stated question.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
21	FH	3		X								?		N	U	<p>Answer "D" contains a cue (a specific determiner) due to being uniquely worded in comparison with the distractors. Specifically, answer "D" lacks wording regarding high/low level that is present in the distractors. In order to balance the answer/distractor choices (and thereby eliminate the aforementioned cuing flaw), answer "D" should be formatted in a similar manner to distractor "B" and should be phrased as "rises and the Main Turbine does NOT trip on high level" (<b>perhaps eliminate the level parts of distractors A, B &amp; C?</b>). Additionally, this question is written at a higher cognitive LOK (versus the listed fundamental level) because it requires the analysis of system responses to a plant transient. Finally, the pedigree needs to justify that this has anything to do with "swell."</p> <p>Reworded distractor thought to contain a cue and removed the unique wording. Added wording to distractor D so it does not appear differently than the other choices. Added justification to the pedigree on how the concept of SWELL is being sampled in this question. The LOK of the question was already selected at the higher cognitive level of Comprehension and Analysis.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
2 2	F	2												N	S	Question is SAT as written.
2 3	F	2				X								N	E S	<p>This question is limited to testing basic knowledge of a system purpose and, as such, possesses insufficient discriminatory validity. Refer to the examples provided in NUREG-1021 Appendix B, Attachment 2, section C. Additionally, the stem is worded in a grammatically awkward manner; it would be preferable to phrase the stem in a manner similar to "which of the following describes..." Finally, Distractors A &amp; B are not plausible.</p> <p>OV: Question originally did have discriminatory value upon discussion however enhancements made to question to address other issues, so the original question is to be considered in need of enhancement.</p> <p>Added plausibility statements to support our use of these distractors for choices in the exam. Enhanced each answer explanation statement as well.</p> <p>Changed Distractor A to enhance plausibility. Question wording enhanced to add clarity.</p> <p>Enhanced question was reviewed by the Chief Examiner and accepted.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
2 4	H	2												N	E S	<p><b>Reference provided.</b> The attached drawing provided for the question is too small for component labeling to be clearly read in its current format.</p> <p>Reworded stem and removed the drawing (embedded reference)</p> <p>The Chief examiner agreed with changes.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>



Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
2 5	F	2				X								M	E S	<p>Distractors “C” and “D” are not plausible; it is highly unlikely that an applicant would have a misconception in which a high torus/suppression pool water level would result in steam discharges to the torus not being quenched and resulting in over-pressurization (as might plausibly be the case in a low torus water level situation). Additionally, the supplied distractor analysis explanations (pedigree) do not correspond to the distractor choices. Finally, this question appears to have been modified from question #74 of the 2015 NRC exam, however, it is listed as being a “new” question.</p> <p>OV: Question originally did not have multiple implausible distractors upon discussion however enhancements made to question to address other issues, so the original question is to be considered in need of enhancement.</p> <p>Added identifier that question was used on the 2015 LOIT exam. Marked question as Modified BANK.</p> <p>Added plausibility statements to support our use of these distractors for choices in the exam. Enhanced each answer explanation statement as well</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
2 6	H	3										X		N	E S	<p>This question does not match the associated K/A statement. Specifically, it it does not require the applicant to diagnose/recognize trends using control room reference material.</p> <p>OV: Question originally met the KA upon discussion however enhancements made to question to address other issues, so the original question is to be considered in need of enhancement.</p> <p>Onsite Validation found that the Question meets KA.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p> <p>Per onsite validation request, EOP Defeat 9 procedure has been added as a provided student reference.</p>
2 7	F	2												N	S	Question is SAT as written.

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
28	H	2												N	E S	<p>This question is written at a fundamental LOK (versus the listed higher cognitive level) because it can be answered by the applicant simply recalling the RHR pump shutoff head value contained in Table 1A of EOP-1.</p> <p>Station maintains that the question is written at the higher cognitive level in that the student has to evaluate a trend and determine what systems are available for injection following a loss of offsite power. In addition, the student has to decide of when those systems will inject.</p> <p>Chief examiner agrees with station that question is a higher order question and not memory fundamental knowledge.</p>
29	H	3				X						X		N	U S	<p>Distractors "C" and "D" are not plausible – ALL pumps! Also, this question does not test the (b) portion of the associated A.2 K/A statement, specifically in that it does not require the applicant to use procedures to correct, control, or mitigate the consequences of abnormal conditions or operations. NUREG-1021 ES-401, section D.2.a states, in part, the following: "When selecting or writing questions for K/As that test coupled K/As (e.g., the A.2 K/A statements in Tiers 1 and 2...), try to test both aspects of the K/A statement. If that is not possible without expending an inordinate amount of resources, limit the scope of the question to that aspect of the K/A statement requiring the highest cognitive level (e.g., the (b) portion of the A.2 K/A statements)."</p> <p>Question modified to remove flaws. Both aspects of the KA statement are now tested.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Added plausibility statements to support our use of these distractors for choices in the exam. Enhanced each answer explanation statement as well</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
30	F	2				X								N	E S	<p>Distractor “A” does not appear to be plausible; it is unclear what misconception would result in an applicant believing that 190 inches is the correct value. Additionally, NUREG-1021 ES-401, section D.2.g, states that “...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect” however, the supplied distractor analysis does not explain the plausibility of distractor “A”. Furthermore, the tense used in the stem is inconsistent; specifically, it states that “...plant <u>is</u> in shutdown cooling when a leak <u>developed</u>...” (emphasis added). Added answer explanation and plausibility statement to address distractor A. Changed tense in stem.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
31	F	2												M	E S	<p>This question appears to have been modified from question #25 of the 2015 NRC exam, however, it is listed as being a “new” question. Marked question as previously given on 2015 exam and modified bank. Annotated as modified bank. Attached original question to key. Chief examiner agrees question is a modified bank question.</p>
32	F	2				X								N	E S	<p>Distractor “D” does not appear to be plausible; it is unclear what misconception would result in an applicant believing that lowering core spray flow following a LOCA would prevent fuel damage. Additionally, NUREG-1021 ES-401, section D.2.g, states that “...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect”. The supplied distractor analysis does not explain the plausibility of distractors “A” or “D”. Provided the appropriate plausibility statements to the distractors. Added information to support the plausibility of Distractor D. Enhanced answer explanation statements. Chief examiner reviewed plausibility statement and agrees distractor is plausible.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
33	F	2												N	S	Question is SAT as written.
34	H	3												N	S	<p><b>Reference provided.</b> Question is SAT as written.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
35	F	2		X										N	E S	<p>Answer “A” contains a cue (a specific determiner), being uniquely worded in comparison with the distractors. Specifically, answer “A” is the only option containing essential power supplies. In order to balance the answer/distractor choices (and thereby eliminate the aforementioned cuing flaw), at least one of the distractors, if possible, should contain essential power supplies as well. Additionally, the stem is grammatically incorrect; specifically, the stem should be stated in a plural form, such as “which of the following <u>are</u> the normal power <u>supplies</u>...”</p> <p>OV: Question originally did not cue to a substantial degree, however enhancements were made to question to address other issues, so the original question is to be considered in need of enhancement.</p> <p>Per onsite validation team, the question did not cue to a substantial degree and is therefore not unsat.</p> <p>Made corrections to grammatical error and made stem address the plurality of the power supplies.</p>
36	F	1				X								N	U S	<p>This question is limited to testing basic knowledge of a system design feature and, as such, possesses insufficient discriminatory validity. Refer to the examples provided in NUREG-1021 Appendix B, Attachment 2, section C. Additionally, Distractors “A”, “C”, and “D” do not appear to be plausible; it is unlikely that an applicant would have misconceptions that would lead to the selection of these options. Furthermore, NUREG-1021 ES-401, section D.2.g, states that “...examination authors shall provide a brief explanation of why the answer is correct and why each of the distractors is plausible but incorrect.” The supplied distractor analysis does not explain the plausibility of each of the distractors.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station’s training program and job description.</p> <p>Replaced question has been reviewed by Onsite Validators and found to be acceptable.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
37	H	2									X			N	U S	<p><b>Reference provided (WHY?).</b> This question contains a <b>backwards logic</b> flaw due to being structured in a manner that asks an applicant for information that is normally received while providing information that normally must be supplied. From the standpoint of operational relevance, it would be more appropriate to, for example, provide the applicant with one or more system parameters and then to ask the applicant about the expected system response. Refer to the examples provided in NUREG-1021 Appendix B, Attachment 2, section G.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Replaced question has been reviewed by Onsite Validators and found to be acceptable.</p>
38	H	3									X	X		N	U S	<p>This question does not match the associated K/A statement, specifically in that it does not require the applicant to prioritize/interpret the significance of annunciators/alarms. Rather, this question tests systems knowledge related to the inputs associated with one specific annunciator. This question also contains a <b>backwards logic</b> flaw.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Replaced question has been reviewed by Onsite Validators and found to be acceptable.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
39	H	2										X		N	U S	<p>This question does not match the associated K/A statement, specifically in that it does not require the applicant to apply knowledge of the assignment of LPRM's to specific APRM channels. Rather, this question tests knowledge related to the inputs associated the calculation of the reactor heat balance. Additionally, the stem of the question requires two typographical errors; in the second bulleted statement there should be a comma after "B" and in the question statement the word "affect" should instead be "effect".</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Replaced question has been reviewed by Onsite Validators and found to be acceptable.</p>
40	H	3												N	S	Question is SAT as written.
41	F	2												N	E S	<p>To be more relative to the K/A recommend restating the first sentence in the stem to read "During the automatic actuation of RCIC, the following,,"</p> <p>Added Automatic Initiation within the stem as suggested.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
42	H	2										X		N	U S	<p>Reselect the K/A. ADS is unnecessary for a large break LOCA; therefore, no procedures are required to mitigate any impact to ADS from a large break LOCA. Additionally, the K/A does not ask for the system purpose</p> <p>New KA selected and question has been rewritten. The question has been replaced to match the new KA. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced meets the KA. The replaced question asks provides the applicant plant conditions in which ADS initiation signals are present. The student must determine what mitigation action must be taken. The question has been validated by the station line personnel and is supported by the station's training program and job description.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
4 3	F	2										X		N	E S	<p>K/A is the ability to predict and/or monitor changes in “valve closures” associated with operating PCIS/NSSS controls. Question should be oriented around verifying isolation valve status and ensuring isolation valves are shut.</p> <p>OV: Question enhanced to better address KA mismatch initial comment, so the original question is to be considered in need of enhancement.</p> <p>Stem has been enhanced to match the KA more closely. Answer choices enhanced to match KA.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
4 4	H	3												N	E S	<ol style="list-style-type: none"> <li>Choice 'A' — revise to state “ so there is <b>only a</b> temporary ...logic; ADS will operate normally.”</li> <li>Choice 'B' — revise the last part to state "...and ADS remains functional via the "B" ADS logic.</li> <li>Choice 'C' — revise to state “...lost power; however, <b>ONLY</b> two ADS valves have control power and will open upon ADS actuation.”</li> <li>Choice 'D' — revise to state “...supply; however control power is lost to two ADS valves, therefore....”</li> </ol> <p>Enhancements to answer choices made per recommendations</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
4 5	H	2				X								N	E S	<p>1. Add “with the Feed Water Level Control System aligned in a normal configuration” to the first sentence in the stem.</p> <p>2. To better fit the K/A, Recommend changing the question to read as follows: With NO operator action:  <b>A. RPV water level will remain at set-point.</b>            B. A RR Runback will occur and RPV water level will return to set-point.            C. A LOW RPV water level SCRAM will occur.            D. A HIGH RPV water level SCRAM will occur</p> <p>Enhancements to answer choices made per recommendations</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
4 6	F	2												N	S	<p>Recommend replacing “design feature” with “component”</p> <p>Enhancements to answer choices made per recommendations</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
4 7	H	2												N	E S	<p>1. In choice 'A', reword to state “<b>The AC supply to the 1D12...1A4.</b>”</p> <p>2. Choice 'B', reword to state “...align to <b>supply bus 1D10.</b>” Choice 'C', add “1D1” to the end of the statement.</p> <p>Enhancements to answer choices made per recommendations</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
4 8	F	2												N	S	<p>Minor editorial enhancement — In the stem, replace “The” with “IRM/APRM recorders,” and remove the phrase from the answer choices.</p> <p>Enhancements to stem and answer choices made per recommendations</p>



Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
4 9	H	2												N	E S	<p>Need a clarifier in the stem to indicate equipment operating status; e.g., all systems are aligned for normal plant operation.</p> <p>Enhancements stem made per recommendations</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
5 0	H	3	X				X					X		N	E S	<p>The K/A is related to the condition where the EDG is the sole supply to the bus and it is desired to restore the bus to offsite power. The correct procedural guidance is contained in OI-304.2. The question is salvageable but requires significant changes – stem focus and distractors must properly align to the KA (The EDG being loaded is not given, for example). OV: Question enhanced to properly identify the correct answer, however, upon discussion, the KA was met initially.</p> <p>Enhancements made per recommendations</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
5 1	H	3												N	E S	<p>Recommended enhancements:</p> <ol style="list-style-type: none"> <li>Replace second bullet with a Loss of Offsite Power and make it the third bullet. Well Water pump status becomes the second bullet.</li> <li>Add a time frame to the loss of 1B3; e.g., Ten minutes later SBDG 1G31 trips.</li> </ol> <p>Revise choices 'B' and 'D' to read "will continue to run with cooling supplied by ...."</p> <p>Enhancements to stem made per recommendations. Stem is now time bound. Reordered bulleted items to make question more readable.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
5 2	F	2												N	E S	<p>Minor enhancement — remove EIN (1K-3) and change Compressor to plural (Compressors).</p> <p>Enhancement to stem made per recommendations.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
5 3	H	2				X						X		N	U S	<p>1. Since automatic makeup to the surge tank is disabled, the question does not fit the K/A. The only automatic actions associated with the RBCCW system are the auto start of the standby pump on low pressure and the Group 7 isolation of the RWCU NRHX.</p> <p>2. In answer choice 'A' change to read: "...makeup will restore level in the surge tank."</p> <p>3. In answer choice 'B' change the word "expansion" to "surge"</p> <p>Add a "period (.) to the end of each answer choice.</p> <p>OV: Question revised to address the KA mismatch and incorporate other enhancements also..</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
5 4	H	3				X	?							N	E S	<p>Choice 'B' may be a subset of 'D' since seal degradation may affect scram times. Explain why "B" is not also true.</p> <p>Choice B has been changed to address subset concern</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
5 5	F	2												N	S	Question is SAT as written.

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
5 6	H	2												N	S	<p>Minor enhancement to stem — Combine the first and second stem sentences to state "The RHR...operating, when the following...."</p> <p>Enhancement made per recommendation</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
5 7	F	3	X									X		N	E S	<p>THERE IS NO CORRECT ANSWER. The stated answer is not the basis for the EOP entry condition. It is a Fuel Pool Cooling system design operating limit. A high SFP temperature is indicative of the inability to cool the pool leading to the potential loss of shielding and or radioactive release of from the pool. The SFP itself is designed to withstand boiling in the pool. Also, stem question and final statement should be combined. OV: Question enhanced to address the basis more directly and incorporate other enhancements also.</p> <p>Validated there is only one correct answer. DAEC Bases statement provided in answer explanation.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
5 8	H	3				X								N	E S	<p>1. Valves 1362A&amp;B (answer choice B) have no applicability to IPOI-5 and therefore are not credible distractors. All other choices are listed as part of the IPOI-5 IMMEDIATE ACTIONS. Need a different distractor</p> <p>One could argue that answer choice 'D' is also correct since Reactor Pressure is stable. The step to close MO-1054 and MO-1055 is bulleted and only needs to be performed if necessary to control pressure. This could be corrected by stating that pressure is lowering (i.e., NOT stable).</p> <p>While we agree that 1362A and B have no power, the operator may conclude the valves could be operated locally.</p> <p>Choice D cannot be correct since it is provided in the stem that there is steam flow and action per procedure is required to prevent excessive cooldown.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
59	H	3	X											N	E S	<p>Note that the K/A is related to the relationship between turbine throttle pressure <u>and</u> reactor pressure. The question in the stem is unnecessary - recommend combining the stem question with the final statement so that the final stem statement reads "Assuming NO operator action is taken, Reactor Pressure will ....".</p> <p>Enhancement made per recommendation</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
60	H	4				X		X						B	E S	<p><b>Reference Provided.</b></p> <ol style="list-style-type: none"> <li>The proposed reference to be provided is not required to answer the question, AND it also can be used to answer Q#59.</li> <li>Since the "Load Set" is normally adjusted to approximately 110%, instead of 100%, to ensure that the pressure regulator is in control. Therefore the speed error will need be greater than 5% to close the CVs and begin to close the IVs. Therefore the speed stated in the stem (and in the answer explanation) needs to be adjusted accordingly. Why wouldn't a trip occur?</li> <li>The only reasonable explanation for turbine speed to increase while paralleled with the grid is a load reject. Stem should be modified to provide a reason for the speed increase (e.g., grid disturbance), if used.</li> <li>Choice 'D' is not plausible with the turbine on line.</li> </ol> <p>OV: Question was enhanced to <b>remove reference</b> and add grid disturbance.</p> <p>Reference has been removed. Answer explanations and plausibility statements enhanced to better support choices. Question stem rewritten to better meet the question intent. .</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
61	F	3												N	S	<p>KA is ability to predict impacts on the “REACTOR CONDENSATE” system, NOT the “Condensate and Demineralized Water” system.</p> <p>OV: Upon further review, original question met KA, and is SAT as written.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
62	H	2												N	E S	<p>1. KA is ability to predict and/or monitor “feedwater heater level” NOT feedwater heater temperature OR reactor power.</p> <p>Answer choice explanations are inaccurate. The dump valve <b>failing</b> open does not divert reheat (extraction) steam, it diverts heater 6A drains from Heater 5a to the main condenser. This reduces the heat addition to heater 5A. Consider providing conditions where the dump valve would be expected to open instead.</p> <p>OV: Upon further review, original question met KA. However other issues led to replacing the question.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
63	H	2	X											N	E S	<p>NO CORRECT ANSWER — Condenser air in-leakage will not cause pressure at the inlet to the hold-up line(s) rise above atmospheric pressure (goes to “0” only).</p> <p>OV: Upon further review, original question required enhancement to address OE.</p>
64	F	2												N	S	<p>1. The intent of KA 286000 K4.06 is knowledge of design features associated with Halon Fire Suppression systems; thus the identifier as Plant Specific.</p> <p>2. Question is applicable to KA K4.03</p> <p>I find it highly unlikely that this question does not have a bank question associated with it associated with the appropriate KA.</p> <p>OV: Upon further review, original question met KA, and is SAT as written.</p>
65	H	3												N	S	<p>1. Explain why LI-AA102-1001 is listed as a Technical Reference.</p> <p>Recommend including SD-733 as a reference.</p> <p>Fixed reference. This was a copy paste error.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
66	H	5							X			X		N	U S	<p>1. 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; specifically, chemistry thresholds that are not “immediate” actions.</p> <p>2. Facility learning objective does not require recall from memory. KA match issue also.</p> <p>3. Delete the picture and list any values needed. Required knowledge is too specific for a Tier 3 (plant-wide) question.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
67	F	2												B	E S	<p>Used on the 2009 NRC Exam</p> <p>1. Recommend combining first and third bullet statements to state “You are a NSOE, unassigned to the shift and working in the Work Control Center.” Whether or not its your first day of work is immaterial.</p> <p>2. Recommend changing the time in choices ‘C’ and ‘D’ to 96 hours to increase plausibility.</p> <p>Formatting (bullets) in the answer explanation are confusing.</p> <p>Enhancement made per recommendation</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
68	H	2				X		X				X	X	B	U S	<p>Used on the 2017 NRC Exam (for KA 295006 AA1.01)</p> <p>1. Question test knowledge of RPS set-points, not conservative decision making knowledge (KA).</p> <p>2. Question is SRO only; Answer is based on implementation of EOP-2 beyond the entry conditions requiring specific knowledge of action levels within the EOP (specifically the required to SCAM and Emergency Depressurize when Torus level cannot be maintained above 7.1 feet.</p> <p>3. The correct answer is the ONLY choice for which an automatic scram is not expected.</p> <p>The question has been replaced to more closely match the KA. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
69	F	2												N	E S	Is/Are there any other “configuration control” procedure(s) —Fleet or Station Specific? IF so, include in the references.  Added reference to fleet procedure.
70	F	3												N	E S	This question is very system specific, as opposed to a generic K/A. ES-401 D.2.a — Ensure that the questions selected for Tier 3 maintain their focus on plant wide generic K/As and do not become an extension of Tier 2.  Reselected KA and resubmitted a new question. Question was accepted with modification by onsite final review during operating test.
71	H	2												N	E S	Choice ‘B’ explanation references the wrong P&L. Should be P&L (3)(b) instead of P&L (13)  Changed the reference to reflect the correct P&L  Strengthened question pedigree by enhancing supporting plausibility and answer explanations.
72	F	2	X											N	E S	Stem wording is awkward “...requirements of ...requirements....” Stated reference does not provide sufficient bases for the question answer.  Enhancement made per recommendation  The enhanced question has been validated by the station line personnel and is supported by the station’s training program and job description.  Strengthened question pedigree by enhancing supporting plausibility and answer explanations.
73	F	2				X								N	E S	This question is very system specific, in particular to a 10 CRF 70.24 requirement, as opposed to a generic knowledge K/A. ES-401 D.2.a — Ensure that the questions selected for Tier 3 maintain their focus on plant wide generic K/As and do not become an extension of Tier 2. As written, question is a relatively low LOD. Recommend changing Choice ‘D’ to 1 instead of 5 (a highly improbable value) to increase LOD>1.  This tests the specific knowledge requirement of fixed monitors and meets the KA. Changed choice D to “1” as recommended.  Strengthened question pedigree by enhancing supporting plausibility and answer explanations.

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
74	F	2												N	S	Question doesn't fit the K/A. Question is a better to Generic K/As 2.4.8 OR 2.4.16 OR maybe 2.4.5 OV: Upon further review, original question met KA, and is SAT as written.
75	F	4							X					N	E S	P&L states "should." This is not a "requirement. Explain the basis for the P&L. Per the fire plan a portable water extinguisher is permanently mounted in the room. Why water mist over Halon or CO2.  Should delineates Shall at this station and within the NextEra Energy Fleet. Should is treated as Shall unless management deems it is necessary to deviate from this philosophy.  The procedure describes exactly what type of extinguisher should be used.  Based upon feedback from the examination team, changed stem to remove requirement and more closely meet the wording of the procedure and added the word "should".
76	H	3	X			X								N	E S	<b>Provided Reference</b> 1) Distractor A justification needs enhancing. State what the misconception is (and why plausible) instead of stating that the plant condition could also result in a loss of most annunciators. If that is possible, it's not only plausible, it's also a valid answer. 2) Question stem should state which EAL, not EALs (plural) should be declared.  Distractor A justification has been enhanced to explain why it is wrong and not a valid answer. Corrected the grammatical error.  Strengthened question pedigree by enhancing supporting plausibility and answer explanations.
77	H	2				X								N	E S	<b>Provided Reference</b> 1) Distractor A is not plausible due to direct lookup. Without the COLR provided (verifiable limits), this distractor is not plausible. Overlap with distractor A (incorrect 2 hour time requirement in this question contradicts correct 4 hour time requirement in SRO Q#5 (Q#80)) 2) Distractor "D" is also not plausible per reference. OV; Revised question to remove LCO numbers to enhance discriminatory value.  Question revisions have been made per onsite validation recommendations.  Strengthened question pedigree by enhancing supporting plausibility and answer explanations.



Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
78	H	2											X	N	E S	<p>1) Question is not SRO-only due to testing proceduralized scram criteria. ROs are required to know procedure entry conditions, mitigative strategies, and parameters such as scram criteria. 2) Answer D justification can be enhanced by applying the requirement that if the generator is connected to the grid and neither stator water cooling pump can be started, scram the reactor. In the given information, no stator water cooling flow exists, which, irrespective of the conductivity prior to the loss of flow, the reactor must be scrammed and IPOI-5 performed. OV; Revised question to remove LCO numbers from replacement question to enhance discriminatory value.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
79	H	3												N	E S	<p>1) Why was 70% RTP chosen? 70% appears arbitrary, as the AOP simply states to maintain within limits.</p> <p>Added in answer explanation the relevance of 70% Reactor Power to answer question.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
80	H	3												B	E S	<p><b>Provided Reference</b></p> <p>1) Assuming the Balance of Plant Operator in the stem is referring to the MCR operator, why would the MCR BOP operator be performing a “plant” walkdown? Consider changing “plant” with “main control board” or something similar.</p> <p>2) LCO 3.2.2 overlap with SRO Q2 (Q77); answer provides correct 4 hour time requirement, countering distractor in SRO Q2 (Q77).</p> <p>3) AOP 693 not provided to validate distractors.</p> <p>1) Removed reference to a walkdown. Not relevant to the question.</p> <p>2) Removed reference to LCO and went based upon actions required to be completed.</p> <p>3) Did not feel providing AOP 262 or AOP 693 to be required for this question. The CRS should know which procedure should be directed as a result of this condition.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
81	H	3		X										N	E S	<p><b>Provided Reference</b></p> <p>1) Why are the applicants being provided with the bases portion accompanying the HCL and DSWSiL curves? They should be provided only the graphs.</p> <p>No bases portion to be provided to the applicants. The only reference proposed to be provided was EOP Graph 4 Heat Capacity Limit Curve</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
8 2	H	3												N	E S	<b>Provided Reference</b> 1) Spacing error in stem between “supply and” 2) Balance of Plant operator was previously described and acronym given (BOP) in SRO Q5 (Q80). Balance of Plant could be shortened to BOP for consistency. 3) Is the 99.2% post-trip SY voltage a value that must be committed to memory for SRO applicants? Is there a specific learning objective for this? Is this also in the LCO 3.8.1 bases?  1) Spacing fixed 2) Fixed the acronym usage 3) Yes, The SROs should know the post trip contingency voltage  Strengthened question pedigree by enhancing supporting plausibility and answer explanations.
8 3	H	3	X				X					X		N	E S	1) Question stem asks for what procedure AND actions the CRS should direct to address the conditions, however, the distractors only address the procedure. 2) KA mismatch. OV; Revised question to enhance discriminatory value.  Question has been revised to address KA mismatch and the stem corrected. Question now requires candidate to deduce a high powered ATWS challenging containment  Strengthened question pedigree by enhancing supporting plausibility and answer explanations.
8 4	H	3				X						X	X	N	U S	1) Question does not match the K/A (knowledge of system purpose and/or function) 2) Question stem asks for what procedure AND action should be taken to address this condition, however, distractor A has an action, but no procedure. 3) Answer C should reference the actual ARP (1C05A A-6) and not simply the “the ARP will direct..” 4) Not SRO-only.  Question replaced  The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.  Strengthened question pedigree by enhancing supporting plausibility and answer explanations.

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
8 5	H	3	X											N	E S	<p><b>Provided Reference</b></p> <p>1) The pictures of the annunciator panel and the MCB mimic do not provide any necessary value to answering the question (or essential information to the stem). The applicant was given information that the steamline was attempted to be isolated and temperature is still rising.</p> <p>Enhancement to the stem was made as recommended. Removed the picture of the Annunciator panel and panel indications.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
8 6	H	3												N	S	<p><b>Provided Reference</b></p> <p>1) First sentence of stem should be "follows", not "follow"</p> <p>2) Question may not match K/A. The operational implication of the NPSH/Vortex limit caution described in the answer justification is not utilized in the question. The question has the applicant validate they are in within the RHR pump operation curves on both graphs and maintain the given flowrate.</p> <p>3) Coincidentally, the applicant could misinterpret the graph and apply the basis of the caution in question and continue to maintain the injection flowrate (i.e., determine the correct answer for the incorrect reason).</p> <p>OV: Upon further review, original question met KA and needed no further enhancements.</p> <p>1) Changed to follows 2) OV comment 3) OV comment</p> <p>Upon further review, original question met KA and needed no further enhancements.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
87	F	3											X	N	U S	<p>Not SRO-only. The question does not adequately address part (b) of the K/A, procedural actions, but rather automatic actions and interlocks, which is RO level knowledge. Procedure entry conditions (part a) are RO level knowledge. Neither part of this question requires SRO specific knowledge.</p> <p>The question has been replaced to match the KA more closely. Replacement question was reviewed by onsite validators and minor enhancements have been incorporated. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>The KA wording was changed due to a typo supplied to the station. This was discovered and corrected on the examination.</p>
88	H	3												N	S	Question is SAT as written.
89	H	3				X								N	E S	<p>1) Use consistency in writing Loss of Offsite Power (SRO Q13 &amp; 14). "Loss of OFFSTIE Power" vs "loss of offsite power".</p> <p>2) Verify ARP 1C04B A-5 is correct in answer A and distractor B "RCIC MO-2305 Turbine Trip". ARP 1C04B A-5, as attached with this question submittal is "Group 3 Isolation Signals in Bypass for Containment Vent" What is the actual title?</p> <p>3) State which QRC in stem</p> <p>1) Fixed inconsistency</p> <p>2) Corrected wrong ARP called out Corrected title</p> <p>3) Stated the QRC required in the stem.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
90	H	3												N	S	<b>Provided Reference</b> Question is SAT as written.
91	H	1											X	N	U S	<p>1) LOD=1</p> <p>2) Not SRO-only as the question can be answered solely by knowing systems knowledge.</p> <p>OV; Enhanced question to support SRO-only.</p> <p>During onsite review, question was deemed to be SRO only.</p> <p>The question has been enhanced to more closely match the KA. Enhanced question was reviewed by onsite validators. The replaced question more closely addresses the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
9 2	F	2					X							N	E S	<p>1) Under REDP8, Section 3.2, Reactivity Management Plan Development, (20), Communications, "Provide an information-only copy of the reactivity change plan to the Nuclear Assurance individual staffing the evolution and the NRC resident. Offer to give a briefing to the resident". Based on this procedural requirement, is the NRC not required to be notified of the power change since it's required that they are provided a copy of the reactivity plan? What is a major change? Please explain and further justify why B is incorrect.</p> <p>2) Suggest asking who is required to be informed just prior to starting the power adjustment.</p> <p>Question has been modified to ask "Just prior to the adjustment" The NRC would not be notified just prior to the adjustment.</p>
9 3	F	3												B	S	2007 ILE Question is SAT as written.
9 4	F	2												B	S	2013 ILE Question is SAT as written.
9 5	H	3												N	S	Question is SAT as written.
9 6	F	3												N	S	Question is SAT as written.
9 7	F	2											X	N	U S	<p>Not SRO-only OV; Replaced question with new KA selected to make SRO-only.</p> <p>KA reselected. KA is</p> <p>The question has been replaced to more closely match the KA. The replaced question meets the KA. The replaced question has been validated by the station line personnel and is supported by the station's training program and job description.</p>
9 8	H	3												N	E S	<p><b>Provided Reference</b></p> <p>1) Stem should refer to the "CRD Repair Room" and not "CRD Rebuild Room", to match the EOP 3 bases.</p> <p>2) Stem should clarify refuel floor – north and/or south; applicant will likely ask this question. Could provide indicator numbers and value (RI 9163 indicates 100 mr/hr, for example)</p> <p>1) Changed stem to read CRD Repair room</p> <p>2) Clarified which refuel floor radiation level</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>

Q	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. Source (B/M/N)	7. Status (U/E/S)	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/Units	Backward	Q – K/A	SRO Only			
99	H	2	X											N	E S	<p>1) Clarify a time duration in the stem. Applicant should understand that annunciator capability will not be restored within the required 15 minutes.</p> <p>Enhancement to the stem was made as recommended.</p> <p>The enhanced question has been validated by the station line personnel and is supported by the station's training program and job description.</p> <p>Strengthened question pedigree by enhancing supporting plausibility and answer explanations.</p>
100	H	3												N	E S	<p><b>Provided Reference</b> While "Torus Cooling in service" is pertinent, it should not be bolded. This is a given equipment alignment condition, which are not bolded throughout the rest of exam (consistency).</p> <p>Removed bolding from stem regarding Torus Cooling.</p>

**General Comments:**

- 2/75 RO questions are provided references:
  - 1, 60
- 10/25 SRO questions are provided references
  - 1, 2, 5, 6, 7, 10, 11, 15, 23, 25

<b>RO TOTALS:</b>	U=14	F=34	B=4	Additional Notes: 'H' = 38-45; N ≥ 8; B ≤ 56
	E=44	H=41	M=2	
	S=17		N=69	
<b>SRO TOTALS:</b>	U=4	F=6	B=3	Additional Notes: 'H' ≥ 13; N ≥ 3; B ≤ 18
	E=14	H=19	M=0	
	S=7		N=22	