

General Comments:

1. Change distractor order on all Bank questions so the distractor order is not identical to the source Bank question.
This is not required by NUREG 1021, however, will be evaluated on a question by question basis and accommodated whenever possible based on balancing of A, B, C, D distribution requirement.
2. Essentially all Technical References are missing Revision numbers.
All question revisions are included in the worksheets and all technical revisions are included at the top right of each reference table.
3. To the extent possible, when parameters are given in the stem, a trend should be given (increasing, decreasing, stable).
Trends included as applicable in submitted questions.
4. To the extent possible, with consideration given to Answer distribution, order answers from Short-to-Long for ease of reading.
This has been evaluated on a question by question basis, some questions were purposefully ordered from Long-to-Short to ensure balancing of A, B, C, D distribution requirement. However, in most cases the Short-to-Long ordering was used when necessary.
5. Plausibility statements like “incorrect but plausible if the applicant doesn’t understand...” or “... applicant doesn’t recall...” or “if applicant thinks wrong answer is correct” or similar statements add very little value to understanding why a distractor is plausible. It is understood that if someone doesn’t remember or doesn’t understand something, they might select the answer as correct.
Misconception or misunderstanding per NUREG 1021 is a plausible reason for a distractor. Included more information in plausibility statements based on individual question comments, as necessary.
6. Plausibility statements should be written with the understanding that Examiners are not licensed operators are your facility. While they are not John Q. Public, it is helpful to provide more information in the Explanations. This precludes the need for Examiners to search Ref Material for information needed to validate all aspects of the answer/distractors. (Note: All time spent by Examiners on exam review is charged to the Initial License Exam and billed to the facility at the current inspection rate.)
Plausibility statements are written that refer to the reference which provides the groundwork for the statement. Included more information in plausibility statements based on individual question comments, as necessary.

7. Ensure capitalization of plant equipment (specific valves, pumps, rad monitors, steam generators, etc) and locations (Containment, Aux Bldg, etc) is consistent throughout ALL questions. Capitalization scheme should be identical to plant procedures.
This is the normal process for CPNPP. We also use capitalization when the intent is to highlight information in the stem.
8. Numerous K/A Match statements do not correctly identify what the K/A requirement is. They appear to be written more on what the question is testing, not what the K/A requires to be tested.
K/A statements have been corrected as requested based on individual question comments.
9. All questions that have appeared on NRC Initial License Exam must be identified, even though they are considered Bank.
This will be included in the worksheets for all questions submitted.
10. The stem bullets should be presented in a logical order to help the applicants process the info. Usually, this is chronological order as that's how train, going through the procedures. This isn't always true, but there should be a reason not to do it this way. Whatever best helps the applicant without violating other rules, like cueing.
This is the normal process for CPNPP. Evaluated and corrected if necessary based on individual question comments.
11. Questions that have been used on a previous NRC exam should be identified in the Question History portion of the worksheet, "Last NRC Exam _____." This is especially true for questions used on either of last 2 NRC exams.
This was included in the submittal for all questions from the last two NRC exams. See statement 9 for questions that are older than 2 years.
12. For all Bank questions used on the last 2 NRC exams (RO and SRO) – check for applicant performance (% correct, questions asked during exam, post-exam comments) and if any post-exam changes were made to the question for any reason.
When applicable the revised question is used.
13. For all questions – Check all two-part questions to ensure both parts are asked as questions and not just fill-in-the-blank statements.
Some fill in the blank questions have two parts and are not 2 by 2 questions.
14. Consider identifying questions in the stem with 1) and 2) to better separate and identify its two parts. Could also use 1) and 2) for each answer. (see below)
We took out the 1 and 2 intentionally to reduce student fatigue and do not intend to restore based on student feedback.

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	Back ward (Ans)	Q – K/A	SRO Only				
1	F	3					X					C			B	U S	Distractors A, B, and C are all correct. If following the procedure, first trip the reactor (Distractor C), then increase seal injection flow (Distractor B) (Step 1 says increase seal injection flow to ALL RCPs, > 6 gpm. Distractor B says "to RCP 2-03 #1 Seal), then ensure CCW flow (Distractor A). Nothing in the stem requires the applicant to identify the <i>FIRST</i> action. Distractor A is NOT correct and plausibility statement required revision. Distractor B required editorial changes to stem to ensure that answer could not be considered correct. Thus only one distractor problem and question is 'E' not 'U'. Distractors A & B swapped in order for psychometric balance.
2	H	3										B			N	S	
3	H	3										C			N	S	
4	H	4										A			N	E S	1. Unit for specific volume is not °F, and this information is not required. Remove mention of specific volume. Corrected. 2. How is all information in stem used? Could any bullets be removed? RCS pressure removed as this was only used for setting the exit parameter for subcooled liquid. All other information is used to eliminate other possible means of reducing the core outlet temperature other than basic heat transfer from ECCS.

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	Back ward (Ans)	Q – K/A	SRO Only				
5	F	4										B			N	E S	<p>1. Distractor cues that either A or B is the correct answer by specifically mentioning isolating or breaking vacuum. Could reword the distractors to remove mention of vacuum. (i.e., close both PORVs; and close containment service air isolation valve.)</p> <p>2. Adding to comment above: Format of each distractor should be the same – either all have “action” and “reason” or none of them do. Example: Distractor A - Close PORVs (action) to isolate vacuum fill manifold (reason). Answer B could be reworded to same format: Close cnmt SA isolation valve (action) to break vacuum in PRT (action) (need to add “in PRT”). Distractors C and D have “action” but no “reason” so they either need a reason or remove the “reason” from A and B. Reworded Answer and Distractors to avoid possible cuing.</p> <p>3. Should 1-LI-452 be LI-462? (Step 5.5.2, p. 39) Corrected.</p> <p>4. Given step 5.5.3, is Distractor A plausible since the procedure directs the PORVs to be closed? It is plausible and not correct.</p> <p>5. Is Distractor D plausible given the PRT is at 23” vacuum (can’t vent a vacuum). Yes, as opening the vent valve would break the vacuum but this would not be an acceptable method.</p> <p>6. How long is “necessary?” (Explanation for Answer B) Could applicant argue that breaking vacuum isn’t necessary because it may take several hours to return a CCP – and therefore several hours is “necessary?” Answer basis is less than strong. Rephrased question to delineate that an action must be taken eliminating any ambiguity that nothing is required.</p> <p>7. Add procedure reference in stem to comply with Part 2 of KA. Added.</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	Back ward (Ans)	Q – K/A	SRO Only				
6	F	3										A			N	E E S	1. LOD should be 3 (or 2). 4 is too high. As a new question, the validation data supported a LOD of 4. 2. If there isn't a hand switch per se, then consider rewording stem to remove the term "hand switch." Use "After attempting closure of both valves, the following indications are observed:" HS stands for Hand Switch - reworded as requested. 3. In stem, 2) – capitalize Pressurizer Vent Valves like it is in bullets above. (consistency) Okay
7	F	2										D			B (2009)	S	This appears to be a bank (or modified) from the 2009 initial license exam, not listed on the question history. Agree 2009 NRC exam, added to worksheet.
8	H	2	X				X					D			N	U S	1. Consider more discrimination than either 430 or <430... This knowledge is LOD=1 so immediately reduces to a 50-50 question. Changed C & D to 326. 2. Explanation for Distractor C says for Part 2 "... but plausible because multiple items discharge to the PRT but they all combine..." What are the "multiple items?" Does it matter? Other relief valves discharge but it does not matter for this question. 3. General Comment – trend on PRZR Vapor Temp and PRT Press? Fixed.
9	H	3										C			N	S	
10	H	2										C			B (2015)	S	

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	Back ward (Ans)	Q – K/A	SRO Only			
11	H	3									D			N	ES	<p>1. Wording of stem is laborious... how about "What is the status of the following two minutes after the above indications first appeared?" Also, consider deleting the first sentence in the question above picture "When the following indications are observed:" because question is asking about 2 minutes later. Revised.</p> <p>2. Explanations don't include a description of what the picture is showing – how the applicant must interpret the picture into what it means... Revised</p> <p>3. Why is it correct to say Tavg will be less than 564 after 2 minutes? Where is the ref for this? The Plant Trip Controller will reduce temperature to 557 and this will have occurred within 2 minutes.</p>
12	H	3									A			N	S	
13	H	3									D			B (2013)	ES	<p>This appears to be a bank from the 2013 initial license exam, not listed on the question history. Correct.</p> <p>1. Is the noun name for 1-RE-5100 correct? (General Comment #6) Revised nomenclature.</p> <p>2. Ref provided doesn't identify 1-RV-5100B. The reference in ALM-3200 to 'Opens discharge to Co-Current Waste' is 5100B. The valve name is not stated in the procedure.</p> <p>3. What is ref for noun names of the 2 valves? RWS-108. Component ID Database referenced for verification purposes.</p>
14	F	3									A			N	ES	Blackout signal or Blackout sequencer? Added clarification.
15	H	3									B			N	ES	<p>1. This is a LOK=H question, as one has to ascertain which valves, then fail positions, then power supplies. Okay.</p> <p>2. First statement "Containment Spray has actuated on Unit 2" doesn't appear to be required. Okay.</p> <p>3. Consider "What power supplies are required for Chemical Additive Tank..." Rephrased</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	Back ward (Ans)	Q – K/A	SRO Only			
16	H	2									C			N	S	
17	H	3									C			M	E S	<p>1. Need to explain why Distractors A and D can't be easily eliminated (LOD=1). If generator level is rising, then FRV would not decrease if moving closer to setpoint, and would not increase if moving away from setpoint.</p> <p>2. Doesn't Part 2 of question depend on how far from setpoint the system is? Based on both of these comments, it is clear that a detailed understanding of the setpoints and control of the FCVs is required. Yes, how far the actual level is from setpoint, changes the demand which adds additional plausibility to all distractors. It is this detailed knowledge that makes this question difficult and is a level 3. Additionally, two SROs missed the question during validation.</p>
18	H	3									D			N	E E S	<p>1. The attached reference discusses main feedwater back leakage for Unit 2 only, and the stem discusses Unit 1. Does this apply? Question is changed to Unit 2. The procedure guidance is both units but the condition is applicable to Unit 2 only.</p> <p>2. Close to an SRO only question because Part 2 requires determination of OPERABLE. Does CP has a specific requirement for RO's to know this? Or is this ok because OPERABLE is determined only from the procedure? This is RO level as it is specifically delineated in a Procedure Note and ROs are expected to have an understanding of Notes and Cautions. An actual determination of Operability is not being made by the RO.</p>
19	H	3									A			N	E E S	<p>Consider adding "2-4 RPM" to Part 2 question to match procedure (instead of "slowly"). Changed.</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	Back ward (Ans)	Q – K/A	SRO Only				
20	H	3				X						B			N	U S	If the battery is supply DC loads, doesn't that mean that switchboard 1ED1 is in service? If so, then A is not a credible distractor. And C isn't credible either. Explanations state that 1ED1 is in service. Revised second part of distractors based on actions for load shedding DC loads from the bus. As this is plausible to minimize voltage decline and is also plausible as this action is performed for a de-energized bus prior to restoration.
21	H	3										B			N	E E S	1. Explanation for Part 1 of answer doesn't address why "requires normal start" is plausible. It explains why Emergency start will still work, but doesn't address the EDG is tripped when low lube oil header pressure occurs without an Emergency start signal present. What would the operator need to do to perform a "normal" start? Local? Remote? Revised plausibility statement and deleted Remote from stem. 2. Is there a 2 min time-delay before a Normal start can occur if the EDG trips on low lube oil pressure with both switches are in Slow start? Yes 3. What defines a Blackout signal (Blackout sequencer)? Blackout signal and sequencer are used interchangeably at CPNPP as a signal is used as the starting point of the sequencer operation when power is restored. 4. Minor editorial edits
22	F	2										D			B (2012)	E S	1. This appears to be a bank from the 2012 initial license exam, not listed on the question history. Correct. 2. All Explanations imply only 1 air receiver – when stem and ref material say 2. Also, ref material distinguishes some actions are affected if 1 of 2 receivers is > 150 psig so it seems important to clearly articulate in the Explanations. Clarified.

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	Back ward (Ans)	Q – K/A	SRO Only				
23	F	2										A			B (2007)	ES	<p>1. This appears to be a bank from the 2007 initial license exam, not listed on the question history. Correct.</p> <p>2. Explain how this meets the intent of the KA by verifying one valve closed. Also, the “action required” is either verify the valve is closed or manually close the valve. It could be argued that saying the valve automatically closes is cueing, and the auto function is disabled is cueing. This is the action required thus it meets the K/A.</p> <p>3. Since this is an A2 KA, there should be a reference to a procedure in the stem. Add “IAW procedure _____” to front or end of Part 2. If there is not a procedure that directs the actions in the answers, then question is Unsat. Added procedure.</p> <p>4. To simplify all answers, take out valve from each and put in stem. Corrected.</p>
24	H	3										D			B (2015)	ES	<p>1. This appears to be a bank from the 2015 initial license exam, not listed on the question history. Correct. Missed that it was on 2015 Exam.</p> <p>2. All answers could be simplified if “SG NR level reaches its LOW-LOW setpoint” was taken out and put in stem. Corrected.</p>
25	H	3										A			N	ES	<p>1. Is this picture showing both red and green lights illuminated? Yes</p> <p>2. Since question asks about before and after SI, why do we need a picture of the valve position during SI actuation? What good is the picture when the question contains the valve nomenclature? Picture adds to K/A match as monitoring is indicated.</p> <p>3. What is AUTO shutdown mean (second bullet)? Clarified.</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	Back ward (Ans)	Q – K/A	SRO Only				
26	F	2										D			N	ES	<p>1. This qualifies as a new question, not modified. Updated.</p> <p>2. Is it possible for 1EB1 and 1EB2 to be credible distractors? Two answers being MCCs and two being switchgears. 1EB1 and 1EB2 would be credible distractors, but the current list appears more credible as written.</p> <p>3. Are 1EB3/4 480 VAC buses and 1EB3-1/4-1 480 VAC MCCs? If not, question is Unsat. Yes, 1EB3-1 and 1EB4-1 are MCCs which come off of the 1EB3 and 1EB4 Switchgear respectively.</p> <p>4. Explanation for C and D list the same IA Compressor. Corrected.</p> <p>5. What is the second part of Explanations A and B mean? And they are the same statement. Removed.</p> <p>6. For Distractors A and B – control power supply to IA Dryers is 480 VAC? Or is it the supply to IA Dryer control power? Use of Control Power terminology was incorrect.</p>
27	H	3										C			N	ES	<p>1. Explanation A and B: For Part 2, explanation for why it's plausible doesn't make sense. The settings for LEAD was set to 0 as stated in the stem. It wasn't an 'as found' reading of 72. Corrected.</p> <p>2. Why is the stem formatted the way it is? Per SOP-509B... then hard return, with procedure title in front part of Part 1 question. Corrected.</p>
28	F	3										C			N	ES	<p>1. Change second bullet into the stem question: Per IPO-010B,, a max of ___ penetrations ... when reducing RCS level below a min of ___ inches... Corrected.</p> <p>2. Plausibility statement for 5 penetrations isn't very helpful. If more conservative is the basis, then the best number is "0." Revised to 0 based on this feedback.</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	Back ward (Ans)	Q – K/A	SRO Only				
29	F	3										B			N	ES	<p>1. Part 1 of Distractors A & B are subsets of C & D. (If less than 70% is right, then less than 30% is also right). Bounded in stem</p> <p>2. Part 2 of Distractors A and C easily eliminated as cold calibrated pressurizer level would not be calibrated by hot leg temperature. (but good if used for Mode changes) This question is not referring to instrument calibration it is asking which instrument should be used during cooldown when a certain temperature is reached. CPNPP uses RCS Hot Leg temperatures for temperature monitoring and mode changes during plant cooldown, thus, making RCS Hot Leg temperatures plausible</p>
30	F	3										C			N	ES	<p>1. Distractor B is also correct in addition to Answer C. The question asks startup rate to get to 2% power. Since startup rate is changed as power approaches 3X10-6 amps, Distractor B is also a correct answer. (Step 5.4.1.C, page 60) Added word "initial" in stem to clarify</p> <p>2. For Distractor B – no ref provided. This is step 5.4.1.C. Corrected references</p> <p>3. For Answer C – the ref provided is from the wrong section in the procedure (Section 5.2, Reactor Startup Using Control Rod Withdrawal to 1 x 10-8 amps). Per the stem, the reactor is critical at 10-8 so the applicable section is now 5.4, Increasing Reactor Power to Approximately 2% Following Reactor Startup And Establishing Main Feedwater Flow to the SGs. Step 5.4.1.B directs a 0.5 dpm SUR to 2% power. Corrected references</p> <p>4. First bullet should read "Reactor startup is in progress on Unit 1 using IPO-002A, Plant Startup From Hot Standby" Okay</p> <p>5. Third bullet should read "Unit Supervisor has directed raising reactor power using control rods to approximately 2%" Then question is simply "Per IPO-002A, what startup rate is used to raise power to 2%?" Okay</p> <p>6. In question, name of procedure is wrong – should be Startup, not Start. Corrected</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	Back ward (Ans)	Q – K/A	SRO Only				
31	H	4										A			N	(E) S	<p>1. This appears to be a bank from the 2013 initial license exam, not listed on the question history.</p> <p>2. This question is Unsat but won't count as one if it's verified that it was a Bank question from a previous NRC exam.</p> <p>3. This is an LOD=1 question, simply testing the knowledge of how to read a steam table.</p> <p>4. It also does not match the K/A, as the question does not deal with the operational implications of saturation and subcooling of water.</p> <p>Question was #32 on 2013 NRC exam with exact same K/A. Rejected K/A as writing a question for this system and this K/A was overlapping other concepts which were already being tested (Q49).</p>
32	F	4										C			N	E S	Minor edit Minor editorial changes
33	H	3	X									B			N	U S	<p>1. Consider Part 1 question: Unaffected SG NR levels will ___? Changed</p> <p>2. What is reference for Part 2 of Answer B? Is the change in RCS Tave time dependent, such that the question should be "Initially, RCS Tave will ___?"</p> <p>References were conflicting, changed part 2 of question.</p>
34	H	3										B			N	E S	<p>1. In Explanation for Answer B, what is reference MR1? List as ref? Add to question refs? Simplified references and added MR1 to references</p> <p>2. ARV setpoint is 1125 psig = 1140 psia. From Steam Tables, 1140 psig is extrapolated to 560.71 so rounded up to 561 (not 562) so could applicant argue no right answer? Originally at 561°F, changed to 562°F based on validation feedback. Changed back to 561°F</p> <p>3. What is IR amps when at POAH? 3×10^{-6} amps</p> <p>Validation data was poor, revised question to reflect effect on RCS, specifically PZR level.</p>
35	F	3										B			N	E S	Edit Part 1 question to "... supply header temperature rises ..." Okay

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	Back ward (Ans)	Q – K/A	SRO Only			
36	H	3									D			N	ES	<p>1. Since power is above 10%, turbine trip will result in a reactor trip. Is there any procedural guidance that would have an operator trip the turbine first? If not, then Part 1 of Distractors A and B are not credible. (P-9 is 50% power, not 10%) The next bullet requires a turbine trip rather than a reactor trip if power were less than 10% thus tripping the turbine without tripping the reactor is plausible and credible.</p> <p>2. A2 K/A's normally reference a procedure in either the stem of the question or in the answer/distractors. Added procedure to stem.</p>
37	F	3									D			N	S	<p>This is a LOK=F question. Agree</p>
38	H	3									B			N	ES	<p>1. With a negative Tave – Tref, it is not plausible to think that inserting control rods would make temperature increase. (So Part 1 of Distractors C and D are not plausible) Also, might be a better question if the deviation is 5°F or higher, and the steps per minute are 72 and 48 (which is the speed in manual). CPNPP believes that original distractors were plausible and thus these changes are editorial. Discerning which direction control rods move based on indication of the meter is definitely RO level and would be considered discriminating in nature for License applicants at a LOD of 2.</p> <p>2. Plausible explanation for 16 spm is that the applicant might think they're in the sloped portion of the speed logic – but the Logic Diagram says 32 spm? Reworded question to ask only parts directly related to K/A without introducing the Distractors which were believed to be implausible</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	Back ward (Ans)	Q – K/A	SRO Only				
39	H	2										A			N	E S	<p>1. Would be helpful to add title of OPGD-3, Attach 5 as Shift Operations Skill of the Craft since it's not identified on page provided. Is there any guidance that specifically states the ARV controller should be manual or auto? No Or is this up to the US? This is up to the US but as temperature is maintained at 557 and no cooldown is initiated in this procedure automatic control would be desired if functioning properly. The lack of definitive guidance is why manually controlling the ARV at 1092 psig is not a distractor as this could not be eliminated as a wrong answer.</p> <p>2. Since stem says EOS-0.1A is in progress and all SG pressures are 1130 and rising, does this mean all SG ARVs have not been controlling SG pressures at 1125 since the Reactor trip? No, the ARVs have a pilot valve arrangement and usually experience a delay/overshoot before the pilot valve opens and allows the ARV to open and control at the controller setpoint. A slightly higher pressure was chosen to ensure that all applicants recognize that an adjustment is necessary.</p>
40	F	3										B			M	S	

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	Back ward (Ans)	Q – K/A	SRO Only				
41	H	3										D			M	ES	<p>1. Not clear why Distractor C isn't also correct (see #5 below) No an RCP is not required to be tripped for loss of CCW to the thermal barrier if seal injection is maintained.</p> <p>2. Is this SRO only knowledge? There is a note in the EOP bases that discusses Phase B isolation, and loss of CCW. Does this go beyond mitigative strategy of the EOP? CPNPP believes the question was a system knowledge level question. Detailed review of the references led to rewording in order to ensure the question is at a system knowledge level and thus RO level without question. Consider these changes to be editorial.</p> <p>3. Explanation for Answer D isn't much help – add WHY is CCW lost to RCP motor and bearing coolers: Hi Cntmt press – Cntmt spray – Phase B – Loss of CCW to Cntmt Improved.</p> <p>4. Explanation for Distractor C isn't much help – WHY isn't CCW lost to RCP thermal barriers for these circumstances but CCW flow IS lost to RCP motor and bearing coolers? Reference? Clarified.</p> <p>5. Stem states what CET temperatures are, however, at this point in the event, RCPs are running so Thot / Tcold / Tave would be used, correct? Not necessarily. It is the highest temperature and in LBLOCAs the CETs are usually the highest. Deleted bullet as CET temperature was not needed for modified question as was the case for the original question.</p>
42	F	2										A			B	ES	<p>1. Add "In accordance with SOP-103A" to either front or end of stem question. Corrected.</p> <p>2. Plausibility statement for Distractor C, Part 1, has no value – everything would be "plausible" if the applicant thought the distractor was the correct answer. Improved plausibility</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	Back ward (Ans)	Q – K/A	SRO Only				
43	H	4										A			N	ES	<p>1. ABN-502, Step 6 is Identify and isolate affected train (valves 4512 and 4514 closed). Step 6.d has the operator verify affected loop isolated. Step 7 is verify one train surge tank level stable or increasing. How can you get to Step 8 with leakage NOT stopped? The surge tank has a separator plate which is solid beginning at about 58% and thus one side stabilizes. Once the leak is fully isolated both sides would then refill. Added additional reference for clarity on partition plate.</p> <p>2. Need to have a procedural reference in the question stem. Corrected.</p> <p>3. Reference: M1-0229-A is barely legible. This is as clear as we can provide without going to oversize document.</p>
44	H	3										A			N	S	<p>1. What is ref for Answer A, Part 2? (if applicant challenges the question) The Thermodynamic properties of the pressurizer. An increase in pressure forces water out of the pressurizer. Additional references provided.</p> <p>2. Anyway to link this to a procedure? ALM, ABN ABN-705.</p>
45	H	4										B			B (2011)	ES	<p>1. This appears to be a bank from the 2011 initial license exam, not listed on the question history. Correct.</p> <p>2. Capitalizing the word AUTOMATIC in the stem might cause the applicants to believe it has enhanced meaning – consider lower case. Agreed.</p>
46	H	2										A			N	ES	<p>1. Add bullet for EOP-0.0A, Reactor Trip and Safety Injection, in progress. Done</p> <p>2. This is a LOK=H question. Agree</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	Back ward (Ans)	Q – K/A	SRO Only				
47	F	3										C	X		N	U S	<p>1. K/A requires knowledge of the reason for HPI/PORV cycling during LOAF. The answer is given in the stem – SI without adequate bleed path.</p> <p>2. Part 1 of Distractors B and D not credible. In LOAF, RCPs are immediately secured so PZR spray is not available (unless it is made clear that it is Alt PZR spray usig CCPs).</p> <p>3. Need to have a procedural reference in the question stem. Determined that proposed question was for a Loss of Heat Sink and not a Loss of Main Feedwater as required by the K/A. Further, determined that writing an RO level question to the K/A was not plausible. Rejected K/A as detailed on ES-401-4. Replaced Question.</p>
48	F	3										D			N	S	This is a LOK=F question. Agree.
49	H	3										D			N	S	
50	H	2										A			N	E S	<p>1. Need to have a procedural reference in the question stem (IAW procedure _____) Added procedure.</p> <p>2. Reword stem – it asks what actions are required, then states the action but infers the applicant to fill in the blanks. Removed the question.</p> <p>3. What ref states LT-551 and 554 are the normal channels (both are Channel 1?) selected for control? Reference provided.</p> <p>4. Second half of all Part 2's has no discriminatory value. (Answer can be identified with Part 1 and either FK-510 or 520 – applicant doesn't need to know FK-530 or 540). Doesn't make the question invalid; just noted. Noted</p>
51	F	2										A			M	E S	For Part 2 question in stem, delete "or equal to" since procedure says to verify volts between 128 and 140 VDC. Deleted text as recommended
52	F	3										B			B (2015R)	S	This appears to be a bank from the 2015 retake exam, not listed on the question history. Added to question history

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	Back ward (Ans)	Q – K/A	SRO Only				
53	F	2										C			M	E S	Is plausibility statement for Part 1, 95 psig, correct? Per ABN-301, if IA Compressor 1-02 had been in Lead, it would start at 105 psig (per NOTE before step 2.3.1, page 4). Are Distractors A and B (Part 1) plausible? SOP-509A is the appropriate reference for IAC operation. With IAC X-01 in LEAD it will cycle between 105 and 115 psig. With IAC 1-02 in BACKUP it will cycle between 100 and 115 psig. If any IAC other than 1-01 and 1-02 is in STANDBY it will cycle between 95 and 115 psig which makes distractors A & B plausible.
54	H	3										C			B (2012)	S	1. Question data states K/A as W/E12, Excessive Heat Transfer. The listed K/A is for 040, Steam Line Rupture. Corrected. 2. What is title of drawing E1-0019 Sht. C? Added 3. References for B and D? Added
55	H	3	X									D		X	M	U E S	1. Add annunciator window name to the first bullet - PRZR PORV OUT TEMP HI "... is in progress <u>for</u> re-establishing..."? Added bullet with annunciator name. 2. ARP says loop seal is for Block Valve, not PORV as listed in stem first bullet. Corrected. 3. While FRH-0.1 says RNO is to open Rx Head and PZR vents, that doesn't substantiate "adequate" or "inadequate" core cooling. During review of this comment, determined that in depth procedural knowledge beyond RO level was required. Rewrote Part 1 of question.

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	Back ward (Ans)	Q – K/A	SRO Only				
56	H	4										D			N	E E S	<p>1. The distractor explanations discuss the voltage regulator being in manual or automatic, but there is no mention of it in the stem. Should the stem state that the voltage regulator is in auto? Added but would be assumed unless stated otherwise.</p> <p>2. 345 KV switchyard voltage limits in ABN-402 (342 - 361 KV) don't match TDM-401A Turbine/Generator Limit Curves, Reactive Capability Curve (340 to 361 kV). TDM states that Transmission Limits are more restrictive which is the reason for the delta.</p> <p>3. ABN-402, Step 5 of ref material for checking main generator capability limits against the curve – this step is under the Generator Voltage Regulator Failure section so is not applicable to question stem. What Ops procedure directs operators to operate Main Gen within curve limitations? Step 5.5 E says "how" to do it, what says "when" to do it? Added Reference</p>
57	H	2										B			N	E S	<p>Asking Part 2 (CB D continues to withdraw) doesn't fit with Part 1 (either tripping the reactor or inserting rods to CBO). Agreed, question order was reversed so that integral worth changing is asked before the RO action.</p>
58	H	3							X			A	X		N	U S	<p>1. Question says K/A EK3.05. Actual K/A is AK3.05. Corrected</p> <p>2. How does this meet KA for "knowledge of the reasons for" actions contained in the EOP/AOP? (The reason is explained in Explanation A.) Part 1 is knowing if SW7 on NMT2 card is trip or bypass; Part 2 is knowing if PZR Level Hi is 3 or 4 channels.</p> <p>3. For Part 2 of D – if there were 4 channels and 1 was bypassed, wouldn't the logic be 2 out of 3?</p> <p>4. Is knowledge of SW #7 on NMT2 card for channel 0461 trivia or minutia? Agreed, this is probably minutia and beyond what is desirable to test. Wrote new question.</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	Back ward (Ans)	Q – K/A	SRO Only				
59	F	3										B			N	E S	<p>1. The stem reads as if automatic safety injection has already been reinstated. Stem should be clarified to state that reinstating automatic safety injection is required. (Could confuse the applicants.) (Consider 3rd bullet: "Operators are performing EOP-0.0A, Attachment 9, Post Event System Realignment, Step 11, to reinstate automatic SI actuation signal" Agreed.</p> <p>2. Based on the NOTE, the operational implications seems to be the Tech Spec requirement for 2 SR detectors to be operable whenever RTB's are closed. An applicant could argue that automatic SI could be reinstated with 1 or 0 SR detectors operable, thus there could be two correct answers. Added clarifying clause to distinguish a single correct answer.</p>
60	H	3				X						D			N	U S	<p>Part 1 of Distractors A and B are not credible with the provided picture. While the explanation states that the applicant must know the power on light is lit when power is available and dark when not available, the lights are "CONTROL POWER ON" and "INSTRUMENT POWER ON," so it is not credible to think that the light would be dark when power was available. Removed the Instrument Power and Control Power ON portion of the picture and revised explanations.</p>
61	F	4										D			N	S	

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	Back ward (Ans)	Q – K/A	SRO Only					
62	F	2	X					X					D			N	U E S	<p>1. This is a LOK=F question. Integrating plant knowledge along with the conditions given is more than just recalling facts, thus CPNPP believes this is H. Chief Examiner determined question LOK=F.</p> <p>2. ABN-304, Rev 9, says “Condenser Available (C-9) is lost with vacuum less than 12.3” Hg” so is setpoint 12.3 or < 12.3 or <= 12.3? Applicant could argue that there is no correct answer. The setpoint is = 12.3”</p> <p>3. What is acceptance range of this setpoint based on plant I&C data? With distractor only 0.3 difference, the range might be large enough to include the 12.0 value. One applicant did exactly this on a previous exam...Detailed review of I&C calibration revealed that the setpoint is 12.3” but the tolerance allows 12.0”, thus per your concern could be considered correct. Based on this changed 12.0”Hg to 17.5”Hg which is the MFP low vacuum trip setpoint.</p> <p>4. Consider combining 1st and 2nd bullets into “Unit 2 is in Hot Standby using IPO-007B, Maintaining Hot Standby” Agreed.</p>
63	F	4											B			B	E S	<p>1. This is a LOK=F question. Okay.</p> <p>2. This appears to be a bank from the 2015 retake exam, not listed on the question history. No, the question is very similar but a different letdown configuration and different answer. This is the one in our bank. The 2015R question (Q65) would have probably been more accurately marked as a modified to the bank question.</p> <p>3. Since 3rd bullet says depressurization is in progress, Part 1 question should be “RCS is being depressurized with ____” Corrected</p> <p>4. Part 2 of question should be “RCS cooldown rate is limited to < ____ °F/hr.” Both procedures say “less than” Added</p>
64	F	2											C			B	S	

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	Back ward (Ans)	Q – K/A	SRO Only				
65	F	3										A			N	ES	1. First bullet – space between Unit 1 and Large Added 2. Should the reference be FRZ-0.2A, not Containment Status Tree since it is an attachment to the procedure? Corrected
66	F	3										B			N	ES	1. Will applicants understand the term “vaulted” or should question ask about the SO being sent to Operations Record Center? Vaulted is a common term at CPNPP and is even used in the same paragraph with respect to “Shift Order is not vaulted.” 2. Consider moving “Operations Standing Order” to beginning of Part 1 question (like Part 2) for ease of reading. Reworded per recommendation and changed superseded to cancelled for agreement with procedure.
67	F	2										C			M (2011)	ES	1. Change the names of the operators from Joe and Dave to something different than the parent question. Joe & Dave are now Rick & Bill 2. Couldn't find NMG-114 on the Reference CD. Provide all NMG's if not previously provided. NMGs were inadvertently omitted will be provided. 3. Format question as a question (Which of the following identifies the expected verbal communications ...) Done 4. The question clearly states verbal comm expectation is during implementation of ERG's within the CR – neither ref identified stated this so is there another ref that says this? Added ODA-102 Reference. Also, communication during emergencies falls into Critical and therefore this guidance must be followed.
68	F	3										C		X	B (2013)	US	1. This appears to be a bank from the 2013 initial license exam, not listed on the question history. 2. This question is SRO only knowledge. (ES-401, page 23, “Evaluating core conditions and emergency classifications based on core conditions.”) When used as a Bank question in 2013, this was an SRO question. Replaced with new question. [Question was not labeled as SRO in bank and was overlooked when reviewing the 2013 exam as only the RO portion was reviewed for the RO exam.]

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	Back ward (Ans)	Q – K/A	SRO Only				
69	F	2										C			N	ES	1. New question – not Bank Okay. 2. Minor edit to stem – remove bullet Done
70	F	2										B			N	ES	1. Consider removing “on 4/1/16 – Unit 1” from all 3 bullets and put it before the timed bullets for ease of reading. What is value of “on 4/1/16”? Removed 4/1/16 and moved Unit 1 2. Consider putting the “MW _{in} ” in the question stems for ease of reading. Moved 3. Question is written in 2 x 3 format (2 choices for Part 1, 3 choices for Part 2). Was this intended? Yes this was intentional as a 2 x 2 would generate an implausible answer. 4. 3 rd bullet – should it read “2100 – Calorimetric is performed” instead of “is due”? Then the Part 2 question would have the “at 2100” deleted. Corrected 5. First question – consider deleting “at 1200” at the end since the time is given in the 2 nd bullet. Corrected.
71	F	2										C			B	EES	1. This question is listed as a Modified bank, but only one minor change to the stem, and the answer does not change. This is a Bank question. Yes it is a bank. 2. Question in stem is worded better in the Bank question. Not per our reading fatigue improvement effort. 3. Explanation for Distractor A says Escorted Rad Worker is from a vendor – are all Escorted Rad Workers not CPNPP employees? They could be a CPNPP employee, but want to avoid confusion with the applicants on escorted versus radiation worker. 4. Need to make sure terminology is correct – Escorted Rad Workers are DDE and operators are TEDE (per STA-655, Attach 8.A) but question stems says DDE for both. Corrected.

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	Back ward (Ans)	Q – K/A	SRO Only				
72	F	3	X									D			B	U E S	<p>1. This is a direct lookup question (LOD=1). All an applicant has to do is look for the "Contact RP" sections. Then, knowing nothing else, can determine that exceeding 8 feet is greater than 7 feet, and thus the correct answer.</p> <p>2. Overlap with RO Admin JPM RA4? Both include reviewing a RWP. Based on these two comments rejected the K/A as demonstrating the ability to comply with RWP requirements without using a RWP does not seem practical. Replaced with Bank question from 2014 NRC.</p>
73	F	3										B			N	E S	<p>Should the 3 SRO's be identified as US's instead to match terminology in ODA-102, Attach 8.A? Since the SM is an SRO, might an applicant think there are 4 SRO's total or that the 3 SRO's must include the SM? Might eliminate possible confusion. Added word 'other' to eliminate confusion.</p>
74	H	3										A			N	E S	<p>1. The explanation for Distractor C states that it is <i>unlikely</i> that only one white annunciator would alarm, not impossible. Need to ensure the correct answer is appeal-proof, or come up with some other distractors. CPNPP does not have any parameters with Orange banding; thus Distractor C cannot be correct. Distractor C is plausible because orange banding is allowed per OWI-109 it just has not been used yet at CPNPP.</p> <p>2. OWI-109 as the reference – where does it discuss WHITE annunciator alarms? Page 6 of 11 has Red, Orange and Yellow but no White. White is the common term used to identify annunciators which do not have a color code. Included another portion of OWI-109 and OPGD 3 Att. 4 to explain. No concerns were raised during validation as to the use of the term 'White.'</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	Back ward (Ans)	Q – K/A	SRO Only				
75	F	2										C			N	E S	First comment in sample item test review is still valid – what reference states that the operator <u>first</u> refers to the LOGIC portion of ALM? How would this choice be defensible to a judge upon appeal? Removed the word 'first' from the first question. The operator must refer to the LOGIC portion of the ALM to determine if the control board alarm setpoint is exceeded. There is no ALM for plant computer alarms, however, there is a section of the ALM which provides Plant Computer points that the operator may refer to but they do not include setpoint and logic information.

SRO Only Portion of Written Exam

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	Back ward (Ans)	Q – K/A	SRO Only				
76	H	2															<p>1. Part 2 of Distractors A and B not credible. Whether the applicant realizes the cause of the trip, he knows he has to perform natural circulation cooldown with no RCPs, thus eliminating two distractors. This is not accurate as both IPO-005A and EOS-0.2A can be performed with no RCPs running (See your Item 4 below). However, only one of the two is the correct procedural transition out of EOS-0.1A - that being a transition to EOS-0.2A.</p> <p>2. SRO-Only statement is not correct. The stem provides status of plant in EOS-0.1A (diagnostics of plant conditions) with direction to perform a cooldown (procedure transition). Only knowledge required to answer question is RO knowledge of First Out Panel and purpose, overall sequence of events or overall mitigative strategy of a plant cooldown without RCPs. Incorrect. As noted in answer to Item 1 both procedures can be performed without RCPs, but only one is a correct procedure transition to a sub-procedure which is not RO level knowledge.</p> <p>3. From Alarm panel shown in stem, how does applicant determine that cause of Turbine trip was main generator lockout? ALM-4000A given as ref shows Digital Alarms that are not included in stem. Also, how are other 3 Probable Causes listed in ALM-4000A ruled out? Not important to answering question. What applicant has is that the Turbine Trip was the First Out and the alarm panel provides sufficient information to determine that RCPs are not running.</p> <p>4. Explanation for Part 2 of Distractor A says IPO-005A cooldown cannot be performed without RCPs, but PreReqs in IPO-005A (2.8) says that if RCPs are stopped, then "PERFORM the compensatory actions of OWI-104-56 as required." What does this mean? Incorrect statement in explanation as IPO-005A can be performed without RCPs running, but cannot be entered without RCPs running from EOS-0.1A. Additionally, RCPs are maintained running in IPO-005A as long as practical. However, the procedure has contingent steps for performing a cooldown which did not initiate from the ERG network without RCPs running. Clarified 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	Back ward (Ans)	Q – K/A	SRO Only				
77	H	4															<p>1. Distractor B can be argued to be correct in addition to Distractor D. To ENSURE a valve is closed means to close it if it is not. The stem does not clarify that you should ensure the valve closes once the conditions are met. Incorrect, as closing the PORV with the current conditions is wrong. When the conditions are met at a later time the valve automatically closes, thus B cannot be correct without assuming additional plant conditions and additional failures. Therefore B is not defensible under any circumstances as correct.</p> <p>2. Should stem indicate that SI has actuated? Has no pertinence on question and thus just adds additional material to the stem which is not necessary.</p> <p>3. At CP, 1 SG blowing dry can reduce RCS temp to 330°F? Not under normal 'single faulted SG' conditions. However, with full AFW flow and operator inattention allowing the other generators to blow down until MSLI, approaching this value is not unprecedented during simulator scenarios</p> <p>4. Where is WR RCS temperature read? Should Loop That be used instead with RCPs running? WR temperatures is a generic term for Tcold and That which should be very similar with RCPs running. CPNPP actually uses Tcold.</p> <p>5. In this event, securing RCPs is not a significant concern until pressure lowers to well under 1,000 psig, correct? Correct.</p> <p>6. SRO-Only statement is not correct. Knowledge of diagnostic steps and decision points in the EOPs... Reworded SRO only statement.</p> <p>7. If PORV 456 is just leaking, could CRS direct opening PORV block valve since PORV should be open anyway and then close it when press is < 580? This could make Distractor A also correct. Note the RNO to Step 5c states 'Manually open one block valve unless it was closed to isolate an open PORV. If the SRO chose to open a block valve to the leaking PORV this would require an ERG procedure deviation which requires at least 2 SROs to concur with, thus not practical while answering a written question.</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 (Ans)	Q – K/A	SRO Only				
78	H	4															<p>1. How can you be certain that S/G levels are still above 50% (correct answer explanation discusses that S/G levels would initially be 67%, but it is not apparent that levels are guaranteed to be above 50%) Based on BOL conditions ambient losses often approach the heat input of the RCPs making it difficult for plant heatup. Under normal conditions each SG would be fed at less than 100 gpm while maintain 10⁻⁸ amps. The increase in AFW flow to 860 gpm as required by FRS-0.1A step 3 would have increased the SG levels from the starting value thus it is likely that the SG levels are > 70% at this time.</p> <p>2. To get to Step 10, Reactor must still be critical otherwise at Step 8, operators would go to Step 18. So either Reactor still > 5% power or IR SUR is not negative. Since stem says critical at 10-8, reactor is below POAH, correct? MSIVs are closed, yes? Then essentially no steaming so SG levels should not lower much, correct? Correct.</p> <p>3. What happens to Reactor power during SG blowdown? Does it reach POAH? The question assumption is that it continues to maintain a zero startup rate.</p> <p>4. Change 5th bullet to read "Operators transitioned from EOP-0.0A to FRS-0.1A, Response to Nuclear Power Generation/ATWT" Added</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	Back ward (Ans)	Q – K/A	SRO Only				
79	H	3	X														<p>1. Unless we expect the applicant's to memorize Step 8 of EOP-2, add to 4th bullet what step 8 is "Check if ECCS Flow Should be Reduced" Added</p> <p>2. The bullets should be presented in a logical order to help the applicants process the info. Usually, this is chronological order as that's how train, going through the procedures. So fault occurs (MSLB), E-0 is entered, AC Safeguards buses (2ST, 2EA2), SI status (can make applicant determine without specifically stating), AFW alignment (AFW flow), RCS temperature and trend (should this be provided?) subcooling, then transition to EOP-2, Step 8 in progress, AFW flow if changed, SG levels and trend, subcooling if changed, RCS pressure and trend, PZR level and trend. Made editorial changes to stem to improve flow. Parameters were in correct order for determinations required by question.</p> <p>This question was submitted as a post-exam comment - CPNPP recommended accepting distractor 'C' as the correct answer and not accepting answer 'D' as a correct answer. The NRC resolution for this question was to delete it from the exam. Therefore, this question as submitted and enhanced is evaluated as Unsat for the purpose of determining whether CPNPP's submittal was Sat or Unsat.</p>
80	M	3				X								X			<p>1. Part 1 of Distractors B and D not plausible, as it seems apparent that any licensed operator could be assigned to perform a procedure during EOP implementation. (In the case where the control room is staffed by two RO's and a Unit Supervisor, there would be no SRO to give it to.)</p> <p>2. For Part 2 – appears the closure of all 4 FWIVs is an entry condition (symptom) into the ABN, which is RO level knowledge. Agreed with comments. Unable to write an SRO question to selected K/A. Reselected and developed new question.</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 (Ans)	Q – K/A	SRO Only			
81	H	4										B		B (2015)	E E S	<p>1. The K/A listed on the outline does not match the K/A on the question. (It appears the initial outline submittal provided by the NRC was incorrect. Please correct the outline.) Corrected on worksheet.</p> <p>2. This question is listed as a Modified bank, but only one minor change to the stem, and the answer does not change. This is a Bank question from the 2015 NRC exam. Identify on the worksheet. Listed as 2015 NRC Bank.</p>
82	H	3										A		N	S	<p>1. Are there any other power requirements that may be more conservative due to the difference in Power Range Channel Readings? i.e., QPTR. No</p> <p>2. This is a LOK=H question. Agree</p>
83	H	4										C		N	E E S	<p>1. Would 8 hours be a better part 2 distractor for Distractors B and D (2 hours plus 6 hours)? Done</p> <p>2. For C and D, Part 1: Add "System" after Rod Control to match OPT-106A. Done</p> <p>3. For Part 2 question – does clock start at time of discovery or at completion of OPT? Discovery, however the surveillance would be considered complete for those rods when the malfunction occurs per the note of LCO 3.1.5: 'This LCO is not applicable while performing SR 3.1.4.2' no longer applies from the time of the malfunction.</p> <p>4. Is applicant expected to have memorized SDB RILs? Yes, for Shutdown Banks - Not Control Banks</p>
84	F	3										B		N	S	

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	Back ward (Ans)	Q – K/A	SRO Only				
85	H	4										C			B	E E S	<p>1. Is listing all cold leg temps the only way for the applicant to rule out a false FRP indication? Seems like cueing... Is loss of RCPs enough info? Yes, all Tcolds are needed and this is not cuing as it is necessary information for the determination of the plant conditions.</p> <p>2. Why not give applicant enough data for them to diagnose an RCS cooldown in progress (3rd bullet) – more operationally valid. Corrected</p> <p>3. Why is Leg 3 so much colder? Because once the ruptured SG is stopped from steaming, the loop becomes stagnant and the cold leg temperature approaches the temperature of ECCS injection flow.</p> <p>4. Bullets are out of order – put in sequence to aid applicants in processing information to the extent possible/reasonable. Reordered.</p>
86	H	2										B			N	E S	<p>1. The stem states that unit 1 is in Mode 3 waiting to enter mode 2, but TCA 1.7 assumes initial reactor power is full power plus 0.6 percent. If so, does the TCA apply, thus does the procedure expediency apply? (procedure expediency applies per OPGD-3, Attach 6, but ref to TCA is incorrect. In fact, it would be a good distractor to see if applicants understand that stem doesn't match initial cond of TCA...) The analysis assumptions for the worst case Inadvertent SI are different from those in the question and thus the TCA should not have been used as a reference for question. Procedure expediency guidance per OPGD-3 is the basis for the actions and correct answer.</p> <p>2. KA Match statement is incorrect. Applicant does NOT have to determine an inadvertent SI has occurred since it's the 2nd bullet! Also, reference to the requirements of the safety analysis is incorrect as the initial conditions in the analysis do not match the stem. (Ref to TCA is also incorrect in SRO Only statement) Corrected.</p> <p>3. 2nd bullet should read "An Inadvertent SI occurs" Done</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	Back ward (Ans)	Q – K/A	SRO Only			
87	H	3												N	S	<p>1. Knowledge of TS LCO 3.7.7 is not tested since it is in all answers. Applicant only needs to know 3.4.6. Is required knowledge of 3.4.6 RO level knowledge or SRO (at LOD=1)? Incorrect as the entry into LCO 3.4.6 is driven by a NOTE below the line in LCO 3.7.7 and thus this is SRO knowledge. As ROs do not declare equipment inoperable SRO knowledge is required to determine that One required RCS loop is inoperable. The SRO must make a determination that one train of CCW inoperable and that a supported system LCO which would not normally need to be entered per TS rules of usage does need to be entered.</p> <p>2. Question is New, not Bank Corrected.</p>
88	H	2	X				X							N	U S	<p>1. Does procedural hierarchy have you respond to alarms and Alarm Procedures first? If so, then 1ALB-8B would be correct, as that is the first procedure to go to, which directs you ABN-305. That would make both part 2 distractors correct. (If procedure hierarchy doesn't specifically direct entry into ABN first – allows concurrent entry – then 2 right answers) Revised stem to properly distinguish which procedure the proper action is driven from and improved wording.</p> <p>2. Reference for TDAFWP Steam Admission Valve powered from 1ED2? Added ALM Reference. Drawing references were very difficult to size to a readable version for inclusion. E1-0020 Sht. F.</p>
89	H	3												N	E S	<p>Would the question work better if part 1 distractors on B and D were "SG 1-04 ARV is OPENED using its CONTROL OVERRIDE SG 1-01 and SG 1-03 ARVs are fully OPENED using their controllers in manual" Both the current wording and the proposed wording are acceptable. Do not see benefit of rewriting and potentially introducing an error.</p>
90	F	3												N	U E S	<p>1. Since the stem states "During turbine runback," the applicant need not interpret any indications, thus the question does not meet the K/A. Reworded to ensure the applicant interprets.</p> <p>2. Part 2 of question is SRO knowledge but doesn't meet KA. Part 1 meets the K/A which meets the requirements.</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	Back ward (Ans)	Q – K/A	SRO Only				
91	F	2										A	X		N	U S	<p>1. How does this meet KA for Containment Iodine Removal? Also, how is “verify system alarm setpoints” met? Preaccess filtration is the only iodine removal system at CPNPP. After reviewing these comments determined that writing an operationally valid SRO level question for the K/A was not possible. Rejected K/A and wrote new question.</p> <p>2. The SRO Only aspect is LCO Tracking Program for Containment Isolation Valves when KA is Containment Iodine Removal?</p>
92	F	3										D			B	E S	<p>1. Is stem operationally valid? Would operator transition from E-0 to E-2 with Containment press > 18 psig? Yes</p> <p>2. Part 2 of A and C is not plausible (or LOD=1). Disagree. Knowing when to perform the FRZ is a difficult SRO Rules of Usage learning point as demonstrated by the fact that an entire table of ODA-407 is committed to this very item.</p>
93	F	3										B			N	S	
94	F	3										C			N	S	<p>1. What is diff between “permission to change Mode” and “approve Mode change?” The permission requirement is a single signoff in the process of MODE changes. The approval is the final authority that states that all permissions have been granted and that the MODE change can proceed.</p>
95	F	3										B			B (2013)	E S	<p>1. The only answer that doesn't begin with the word “with” is the correct answer... cueing? Can Distractor A be reworded? Reworded Answer to make agree with psychometrics of distractors.</p> <p>2. This appears to be a bank from the 2013 NRC exam, not listed on the question history Agree</p>
96	F	4										A			N	S	

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	Back ward (Ans)	Q – K/A	SRO Only				
97	F	2										B			N	E S	1. Stem cues that two distractors are incorrect. The cue states that a “Batch Liquid Radioactive Effluent Release” is planned, and the correct answer is a “Batch Radioactive Effluent release”. This makes part 2 of Distractors C and D implausible. Disagree, validators have selected ‘D’ during both validations. ‘C’ has not been picked based on individuals knowing the time is 15 minutes and thereby eliminating ‘C’, but both must be plausible as ‘D’ has been selected by several individuals. 2. Borderline Non-Tier 3 question as it does not test to plant-wide, generic knowledge. It is specific to a given set of plant conditions. Disagree as Generic K/A statement drives to a specific given set of plant conditions.
98	F	2										D			N	S	
99	H	4	X									A			N	U E S	This is not a tier 3 question. It does not focus on plant-wide generic knowledge and abilities and is an extension of Tier 2, “Plant Systems.” Based on this feedback rejected K/A as it cannot be written to for Tier 3.
100	H	2										C			B (2010)	S	While question is a modification of the question attached, that question has been modified before. This is a Bank question from 2010 initial license exam, Question 100. Identify on worksheet. Done.
RO:		S – 16 (21%) E – 48 (64%) U – 11 (15%)															
SRO:		S – 8 (32%) E – 11 (44%) U – 6 (24%)															

Instructions

(Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts:

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.

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 (Ans)	Q – K/A	SRO Only				
2.	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)																
3.	Check the appropriate box if a psychometric flaw is identified: <ul style="list-style-type: none"> • “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, etc.). • “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 is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem). 																
4.	Check the appropriate box if a job content error is identified: <ul style="list-style-type: none"> • 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. 																
5.	Check questions that are sampled for conformance with the approved K/A and those K/As that are <i>designated SRO-only</i> (K/A and license level mismatches are unacceptable)																
6.	Enter question’s source: (B)ank, (M)odified, or (N)ew. Verify that (M)odified questions meet the criteria of ES-401 Section D.2.f.																
7.	Based on the reviewer’s judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of Iditorial enhancement, or (S)atisfactory?																
8.	At a minimum, explain any “U” Status ratings (e.g., how the Appendix B psychometric attributes are not being met).																