

Palisades 2014 Written Exam

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
1	H	3											Y		B	S	
2	L	3				X									B	U E	No correct answer. SGs ensure heat removal from PCS. A running PCP with minimal delta-T and adequate sub-cooling ensure core heat removal. RESOLUTION: Choice 'b' revised to state: "Steam Generators with natural circulation flow."
3	L												N		B	U	The question is related to PCP operating limits and not to Pressurized Thermal Shock (PTS) limits. RESOLUTION: To be replaced
3R	L(H)												Y		B	S	LOK – recall of basis for action.
4	H	3				X							Mar		B	E	Marginal K/A match since the described malfunction could lead to seal failure. Distracter 'A' and 'D' seem to be saying the same thing. Recommend changing one of them. RESOLUTION: Choice 'd' was replaced. Choice 'd' still does not seem credible. Suggest "Increased seal leakage due to a reduction in seal efficiency as the pumps cost down." RESOLUTION: Recommended change was made.
5	H	2											Y		B	S	
6	H	2											N		B	U	K/A stem statement supplied with question does not match stem statement in outline (suspect a cut and paste error since "Knowledge of reasons" is associated with AK3). RESOLUTION: K/A statement fixed to match selected K/A. Question related to cause (loss of air) of a loss of RHR and not the operational implications (i.e., impact) of the loss of RHR. RESOLUTION: The stem question was rewritten to focus on the impact to heat removal from the core, rather than impact on RHR. Suggest changing distracters 'a' and 'c' to say "PCS forced circulation" instead of "SDC flow." RESOLUTION: Suggested change was made.

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6R	H	2										Y		B	S	
7	H	3	X									Y		B	E	Reword stem to ask "Which of the following describes a probable location for the loss of inventory from the CCW system?" RESOLUTION: Stem revised as requested.
8	H	3										Y		B	E	Reword item 1) for answer choices 'c' and 'd' so that they match RESOLUTION: Item 1) for choices 'c' and 'd' revised to match.
9	H											N		B	U	Question asks what the preferred suction path is given conditions provided in the stem (ATWS with loss of Bus 1D). K/A is related to the REASON for aligning the CCP suction to the RWST (SIRWT). RESOLUTION: To be revised or replaced. Question is HCL due to recognition that loss of Bus 1D prevents using BA Pumps.
9R1	L(H)	2				X								B	U	Low Cognitive level – no analysis is requires. Recall of RC-2 actions. Explain why choices 'c' and 'd' are plausible. Alignment to spent fuel pools is not mentioned anywhere in the RC Functional Recovery Procedures. RESOLUTION: Choices 'c' and 'd' revised to address concern
9R2	L	2										Y		B	S	
10	H	4										N		B	U	Question asks how to determine if natural circulation exists. K/A is related to the operational implications associated with natural circulation during SGTR recovery (e.g., how is cooldown of the affected loop impacted?). RESOLUTION: Question was revised to meet K/A
10R	H	3	X									Y		N	E	Stem question needs to be modified or choice 'b' revised. The spread of contamination would be a concern but is an acceptable alternative to steaming to the atmosphere. Possible fix: "Which of the following is an intentional consequence of pursuing an aggressive cooldown under these conditions?" RESOLUTION: Revised as suggested.

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11	H	4										Y		M	E	(Modified from question used on 2008 RO Audit Exam) Change does not meet the criteria for a significantly modified question. RESOLUTION: Changed source classification to BANK. Recommend the following changes: 1) Delete reference to EOP-6 2) Add a bullet indicating that there has been no significant increase in Containment atmospheric radiation monitor readings 3) Delete the word "overcooling" from the stem. 4) Label S/G parameters (pressure or level) RESOLUTION: Each of the above changes [1] through 4]) were made.
12	H	2				X						Y		N	E	Since stem stated that P-8A failed to start, choice 'b' is not plausible RESOLUTION: Removed P-8A failure to start bullet from stem.
13	L	3										Y		B	S	
14	H	2				X						Y		N	U E	The Service Water System response to a loss of offsite power is the same regardless of whether a SIS occurs (all three pumps sequence on). Any distracter which indicates otherwise does not appear to be credible. RESOLUTION: Facility believes distracters are credible since statements describe loading sequences that are similar to how other plant loads sequence. First stem bullet revised to state that P-7C is OPERABLE but NOT in Standby
15	L	1										Y		B	U	Simple Recall of NI power supply. RESOLUTION: Question was replaced.
15R	L	3										Y		N	E	RESOLUTION: Distracters 'b' and 'c' changed to read "...EY-10."; "...EY-30."; respectively.

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16	L	2										N		B	U	2010 NRC RO EXAM; K/A is a Generic K/A but must be still be linked to Loss of DC Power. Simply stating that one train of DC power has been lost does not meet the intent, especially since question can be answered without any knowledge of DC status. Must somehow tie how loss of train impacts the associated instruments. RESOLUTION: Question was replaced.
16R	H	2										Y		N	S	
17	H	3	X									Y		M	E	Add EK-1103 annunciator in solid. Reword stem to ask "Which of the following describes a probable location for the air leak?" See Q65. RESOLUTION: Replaced question.
17R	H	3										Y		N	E	Change Item 1) of choice 'c' to "No Instrument Air Compressors are running due to shedding of non-essential loads from LCC-12." Change Item 1) of choice 'd' to "No Instrument Air Compressors are running due to failure of the Train (A or B) NSD Sequencer" RESOLUTION: Suggested changes were made.
18	L	3	X									Y		B	E	2012 NRC RO Exam The question setup (bulleted list) is unnecessary to answer question. Recommend eliminating or simplifying (eliminating 1 st , 2 nd , and 4 th bullets) state that regulator was transferred to DC in response to the inability to adjust Generator Voltage using the AC Adjuster. RESOLUTION: Bulleted list replaced with narrative paragraph that does not contain information from bullets 1 and 2. Move "determines that the MEL has actuated" to first sentence [i.e., alarm actuated due to actuation of MEL]. Change verb tense to past tense. RESOLUTION: Change made as recommended. References listed are associated with loss of air (Q#17) RESOLUTION: Reference list corrected.

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19	H	2	X		X							N		B	U	<p>The question can be answered strictly on knowledge of safety function hierarchy without the stem details.</p> <p>RESOLUTION: By removing the word "procedurally" from the stem, focus was changed to test system knowledge as well.</p> <p>While the stem includes multiple stuck control rods the question does not test the K/A. Comment withdrawn.</p> <p>How can you Emergency Borate without first restoring power from the EDGs.</p> <p>RESOLUTION: Question stem was changed to remove the word "procedurally" and correct answer changed to reflect that power must be restored before emergency boration can take place.</p>
19R	H	3										Y		M	S	
20	H	3	X									Y		N	E	<p>Recommend rewording the question to focus on prioritization rather than identifying a requirement for a contingency action which implies memorization of procedure actions beyond immediate actions.</p> <p>RESOLUTION: Initial facility response was that question was OK as submitted. Agreed to change stem select choice with highest priority. Changed indicated level in choice 'd' to < 5% so that applicant will have to choose between choices 'c' and 'd'.</p>
21	L	2	X									Y		B	E	<p>2013 NRC RO Exam</p> <p>Recommend rewording stem to ask whether MODE 2 entry is permitted or not.</p>
															S	<p>RESOLUTION: OK as is.</p>
22	L(H)	3				X						Y		B	E	<p>Choice 'a' does not seem plausible. Are there any other individual monitors that require two channels to be tripped before alarming in the MCR</p>
															S	<p>RESOLUTION: OK as is. There are other rad monitors that require two channels to be tripped before alarms are actuated.</p>

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23	L(H)		X					X					Y		N	U	<p>Is EK-1371 triggered by the “down-scale” condition or by the “Fail” condition (i.e., after the 5 minute time delay)? If it is the first condition, then the validity of the question is called into play (it wouldn’t take 5 minutes for the operator to check the monitor).</p> <p><i>Facility Response to Follow-up Question: EK-1371 alarm is actuated when the monitor initially goes downscale.</i></p> <p>RESOLUTION: First part of the question was revised to determine if immediate receipt of the “Fail” light is an expected condition.</p> <p>What is the basis for the second part of the answer choices? I was unable to find a technical basis to support this. Neither the procedures listed nor the ODCM supports continued release using a back up monitor.</p> <p><i>Facility Response: SOP-37, 4.0 b (Plant Requirements)</i></p> <p>Should the word “release” be inserted following the word “batch” in the first and second bullets?</p> <p>RESOLUTION: “release” inserted after “batch”.</p> <p>Determination of the second part of the question is an SRO function Recommend changing the second part to address whether or not the discharge line will automatically isolate.</p> <p>RESOLUTION: Revised 2nd part of question as recommended.</p>
23R	H	3											Y		N	S	
24	L												N		B	U	<p>RIA-1818A(B) are Continuous Ari Monitors and not Area Radiation Monitors</p> <p>RESOLUTION: Change K/A to AA1.01 with new question.</p>
24R	L	2											Y		B	S	<p>Choices ‘a’ and ‘c’ seem to be saying he same thing. Explain</p> <p>RESOLUTION: V-7A/B and V-8A/B will still supply and exhaust air from the SFP area.</p>
25	H	4											N		N	U	<p>Question does not test the reason why HPSI flow must be restored or the criteria for throttling HPSI flow. The question is testing knowledge of the actions performed by the DBA sequencer.</p>
													Y			S	<p>RESOLUTION: OK as is. Question tests the knowledge that adequate core cooling exists without any additional operator actions.</p>

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26	H	2	X									Y		B	E	Change question to "...potential source of leakage between the PCS and CCW System ...is a Primary Coolant Pump." RESOLUTION: Requested change made.
27	H	3										Y		B	S	
28	H	2										Y		M	E	Recommend deleting Part 1 of the question and change Part 2 choices to: 25, 50, 75, and 100% (or other plausible flow rates; for example if two pumps are running in same loop with no pumps in other loop is indicated flow > 50%; or if only one pump trips is indicated flow more or less than 75%). As written the question appears more as a power supply question. RESOLUTION: Requested changes were made.
29	L	2										Y		B	S	
30	H	4										Y		B	S	
31	H	4						X				Y		B	U	The described evolution in not permitted by Tech Specs (Mode 6 with water level below 647'. RESOLUTION: Question was revised but answer does not appear to be correct. RESOLUTION: Answer determined to be OK as is.
31R	H	3										Y		N	S	
32	H	3	X				X					Y		B	U	To be consistent with the K/A the 'c' and 'd' choices should be local operations. RESOLUTION: Choice 'c'; Supplement 21 is performed in the Switchyard. RESOLUTION: Choice 'd'; distractor replaced. K/A has two parts: knowledge of local operation and the resulting operational effects. Question does not appear to address 2 nd part. RESOLUTION: Resultant effect added to each distractor.
32R	H	3										Y		B	S	

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33	H	2				X							Y		N	U	The "Assuming" statement is unnecessary. The first bullet not required to answer question. The 'a' and 'c' choices are not plausible; basic knowledge of design criteria rules out the first part (electrical separation and redundancy), and fundamental knowledge of operator practices rules out the second part (failure of an automatic action would require manual operation of both channels) RESOLUTION: Question revised to address the implausible distracter concerns.
33R	H	2											Y		N	S	During review of the revised question a potential overlap with the operating test was identified. RESOLUTION: Potential overlap issue was evaluated and determined to be inconsequential.
34	L												N		B	U	Question does not test knowledge of how water in the quench tank is cooled (all choices have the same statement related to cooling by primary makeup water). The question tests knowledge of how the relief discharges into the tank. The K/A asks how heat is removed from the TANK. RESOLUTION: Question revised but still needs some work.
34R	L	2											Y		N	S	RESOLUTION: Subsequent changes addressed all concerns.
35	H	3											Y		B	S	
36	H	3	X										Y		B	E	Recommend changing the pressure in choice "a" to >129 psig. Verifying pressure greater than 115 psig would be a correct action if pump auto started. As written having two correct actions for auto start might provide a cue for elimination of two distracters. RESOLUTION: Answer choice 'a' changed as recommended.
37	L(H)	2											Y		M	S	Distractor Analysis explanation for choices 'a' and 'd' should contain a more detailed explanation (e.g., current draw for starting pump; with discharge valve open is not expected to exceed trip settings)

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38	L	1	X									Y		N	U	<p>The first three bullets add no value to question; can be answered without them.</p> <p>Simple recall of power supply. Recommend rewriting stem and answer choices to include availability valve and whether LTOP requirements are still met (e.g., Affects position indication only, LTOP Requirements are still satisfied; Position indication not affected but valve cannot be operated, LTOP Requirements not satisfied, etc.)</p> <p>RESOLUTION: Question rewritten to incorporate the above recommendation.</p>
38R	H	3										Y		N	S	
39	H	3										Y		N	E	<p>Recommend eliminating part 1. Also eliminate annunciators and simply list parameters.</p> <p>RESOLUTION: OK as is. No changes were made.</p>
40	H	3										Y		B	S	
41	L	2				X								B	U	<p>Distracter 'c' is not credible.</p> <p>Distracter 'a' does not seem credible (RESET switches are typically momentary contact).</p> <p>Provide a more detailed explanation of why choice 'b' is plausible (e.g., only defeats left or right logic)</p> <p>RESOLUTION: Question was replaced.</p>
41R	H	3										Y		B	S	
42	H					X						N		B	U	<p>What is the procedural action that corrects controls or mitigates the malfunction?</p> <p>If the containment isolation valves are operable, then why is the containment operability impacted?</p> <p>RESOLUTION: Question was revised to fix implausible distracter and to address K/A match</p>

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42R1								X	X				Y		B	U	<p>Use of specific ARP action requires the applicant to recall a fact not required to be memorized and entry into a specific TS action requirement is a SRO function.</p> <p>Given the above condition, what is the most likely cause of the alarm and the recommended action to mitigate that condition?</p> <p>Possible answer choices:</p> <p>A primary coolant system leak from [an isolable source]; shut the [associated isolation valve]</p> <p>A secondary side leak from from [an isolable source]; shut the [associated isolation valve]</p> <p>VHX-4 cooling coil leak; shut CV-0869</p> <p>VHX-4 cooling coil leak; shut CV-847</p> <p>RESOLUTION: Question revised as suggested.</p>
42R2	H	3											Y		N	S	
43	H	2											Y		B	S	
44	H	3				X							Y		B	E	<p>As worded, choice 'b' is a subset of choice 'a', and choice 'c' is a subset of choice 'd'. Replace "is LTE" with "reaches".</p> <p>RESOLUTION: Fixed as requested.</p>
45	H	2				X							N		N	U	<p>Question does not involve a loss or malfunction of MFW. Question describes normal response to a plant trip.</p> <p>RESOLUTION: Changed initiating event to a Condensate Pump Trip</p> <p>Part 1 of Choices 'a' and 'c' should be reworded to state "... frozen at pre-trip value" instead of "as-is"</p> <p>RESOLUTION: Change made as requested.</p> <p>Parts 1 and 2 need to be changed since if applicant knows that P8A starts first then question becomes related to knowledge of AFAS vs MSIS logic. Choices 'b' and 'd' are easily eliminated by recognition that either part 1 or part 2 is wrong.</p> <p>Remove reference to P-8A or P-8C from part 2 of answer choices and simply state that an AFW pump is injecting at 165 gpm to one or both Steam Generators.</p>
45R	H	2											Y		N	S	RESOLUTION: Recommended changes were made.

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46	H	3	X									N		B	U	<p>Question relates to the ability to monitor but not to the ability to manually operate the controllers.</p> <p>Picture is unnecessary and may provide lead to confusion.</p> <p>Recommended fix: indicate a feed/steam flow mismatch (caused by an instrument failure) and then ask for action to correct (e.g., take manual control and raise or lower output or leave in auto and raise or lower setpoint)</p> <p>RESOLUTION: Question to be replaced (1st replacement question rejected due to similarity to Q45.</p>
46R1	H	3	X									Y		N	U	<p>2nd Replacement question. POST EXAM COMMENT: Stem does not provide any information to indicate, or support the assumption, that the lowering feed flow indication is due to a flow instrument failure. Based on the information provided in the stem, the only valid assumption is that Main Feedwater Flow is actually lowering. If the actual Feedwater flow is less than Steam flow and still lowering, then Steam Generator level must be lowering due to inability of the control system to automatically maintain the Steam Generator level; therefore, answer choice (b) is the expected operator response.</p>
46R2	H	3										Y		N	S	<p>RESOLUTION: Answer was changed based on above post exam comment resolution.</p>
47	L(H)	2										Y		M	E	<p>Delete the words "in prioritized order". This is inferred by "preferred" "in accordance with EOP 7.0"</p> <p>RESOLUTION: Changed as requested.</p>
48	L	2		X			X					Y		N	E	<p>With an almost 50 amp difference, distracter 'b' is not credible. If P-8C is high then P-8A is high also and choice 'c' would be true. Suggested fix: place both current indicators at or just above 100 amps; then 'b' would be the correct answer.</p> <p>RESOLUTION: Question fixed as recommended above.</p>
49	L	3										Y		B	S	
50	H	3										Y		B	S	<p>Provide a more detailed explanation of why choice 'd' is plausible (e.g., would be true if BC 1 was in service)</p> <p>RESOLUTION: Distracter analysis fixed.</p>
51	L	3										Y		M	S	
52	L	3										Y		B	S	

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53	L	2				X						Y		B	S	Need a more detailed explanation of why 'b' is correct (i.e., what is(are) the cooling water source(s).
															U	During review of the question in response to the above concern it was determined that there was no correct answer. Cooling for the AFW pump comes off the discharge of the pump and Service Water is the backup supply (suction source) for AFW.
53R	L	2										Y		M	S	RESOLUTION: Choice 'b' was changed to a Charging Pump since Service Water is a backup to AFW
54	L(H)	2										Y		B	S	LCL -- Recall of control logic/interlocks. Cognitive level corrected.
55	H	3										N		B	U	The referenced caution does not seem applicable to the question. The caution would be tested if the sump suction failed to open, then one CS pump would be trying to supply both spray headers and two HPSI pumps.
												Y			S	RESOLUTION: OK as is. Have to recognize that the current configuration is acceptable.
56	H	4				X			X			Y		N	U	Is the Group 3 PDIL always the same? Is it really required to be memorized?
															S	RESOLUTION: Group 3 PDIL (Hot zero power) does not change and is required to be memorize. Unless applicants are required to memorize ECP limits, choices 'c' and 'd' are not plausible. RESOLUTION: Actions could be plausible if the applicant does not recognize that being below the PDIL is definitely below the ECP lower limit. No changes were made.
57	L	4										Y		N	S	Seems somewhat trivial coming from an obscure attachment to a SOP. RESOLUTION: According to facility, use of this procedure section is relatively common so applicants should be familiar with activity.

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58	H	3					X						Y		M	E	Choice 'b' appears to be a subset of choice 'c'; and if there was a low level Tech Spec, then choice 'a' and 'd' could be part of the same set. RESOLUTION: After further evaluation the answer choices are acceptable as written. Recommend changing stem question to ask which limitation will be reached first? RESOLUTION: Recommended change was made. Need to correct explanation of correct answer (actual level is rising NOT lowering). RESOLUTION: Distractor analysis was fixed.
59	L	3											Y		B	S	
60	L(H)	2											Y		B	S	LCL – The applicant is told that WR NI's are inop. Memorization of RC-1 acceptance criteria. RESOLUTION: Cognitive level changed to LOW.
61	H	3											Y		B	S	
62	L(H)	2											Y		B	S	
63	L	2											Y		B	E	To increase level of difficulty place EK-1308 in stem and ask for required action; plausible distracters might be to start standby pump (per ARP); trip LPCI (SDC) pumps; immediately evacuate the area. RESOLUTION: Question revised as recommended.
64	H	3					X						Y		N	U S	Choices 'c' and 'd' are not plausible in that relief valves vent paths are not isolable. RESOLUTION: Choices are plausible since Waste Gas Surge Tank relief discharges to the stack through a monitored flow path.
65	L	2		X									Y		B	E S	This knowledge is also tested in question 17. Since question Q65 specifically calls for setpoint of CV-1212 it provides a cue to answer Q17. RESOLUTION: Question 17 was replaced, eliminating the possible cue to correct answer in question 17.

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66	L	1		X								Y		B	U	The answer is obvious for the choices given. RESOLUTION: Revised question by changing one of the distracters so that correct answer choice isn't so obvious. Procedure title provided cue also. RESOLUTION: Removed procedure title from stem.
66R	L	2										Y		B	S	
67	L	3								X		N		B	U	K/A is knowledge of RO duties, NOT knowledge of Reactor Engineer responsibilities. Question is an attempt to match K/A by asking "What is NOT a RO responsibility." RESOLUTION: Replaced the question
67R	L	2										Y		B	S	
68	H	3										Y		B	S	
69	H	2										Y		B	S	Reference needs to be updated. Not sure explanation of choice 'a' is accurate, since standby lineups typically have discharge valves open and a leaking check valve could cause same affect. Pump and piping inside the isolation valves would have the same ratings. RESOLUTION: References updated and accuracy of choice 'a' was verified.
70	L	2										Y		B	S	
71	L	2										Y		M	S	
72	L	3										Y		B	S	
73	L	3										Y		B	S	
74	L	2										N		B	U	K/A is asking how AOP/EOP mitigating strategies are impacted by low power or shutdown plant conditions. Question test the definition of "degraded containment" and application of mitigating strategies related a degraded containment. RESOLUTION: Question to be re-written
74R	H	3	X									Y		N	E	Enhancements were made to the stem to clarify initial conditions.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
75	L	3	X									N		B	U	Does NOT test second part of the K/A; " and the resultant operational effects." Needs rework. RESOLUTION: Question was replaced.
75R	L	2	X									Y		N	E	Recommend inserting the words "on the Atmospheric Steam Dumps" after the word "effect(s)". RESOLUTION: Recommended change was made.
# of Flaws (%)		3 (4)	15 (20)	3 (4)	0	12 (16)	1 (1.3)	3 (4)	1 (1.3)	0	1 (1.3)	14 (18.7)				BANK = 54 [43] MODIFIED = 8[9] NEW = 13[23] LCL/HCL = 36/39 (48/52%) 27[24(32%)] UNSAT Questions
																SAMPLES: No initial sample review was conducted. ALL questions were reviewed in detail.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
*	Denotes question is ½ taken twice!					64%											
76	H	2										Y	Y	N	E	First Bullet: fix grammar! Plant is in RESOLUTION: Grammar was fixed.	
77*	H	1		X		X						Y	NO	N	U	Distractors B & C don't include a procedure reference so they are not in A.2 format. Cue in stem, "Loss of 125 VDC" is cue to creditable distractors A & D. Too low difficult rating due to cue and non-credible distractors. Suggest deleting "125 VDC" from stem and just leave panel designator. Add credible (but incorrect) AOP for loss of AC instrument bus(?) for distractors B & C. This would increase LOD and correct distractor issues. DWR: Not SRO only. RO is required to know AOP entry conditions. Part 1 is system knowledge	
77R1	H	2										Y	NO	N	U	Submitted change is simply a formatting change with no significant change to the question. It is still not SRO only. AOP-30 has already been entered as stated in the stem loss of the DC panel requires entry into AOP 17. (DRM and DWR)	
77R2	H	3										Y	Y	N	S	RESOLUTION: Question was revised to test a different aspect of AOP-30, and requires knowledge of the procedural requirements associated with establishing an alternate shutdown cooling method.	
78	H	3										Y	Y	B	S		
79*	H	4										Y	Y	B	S	(Does the operating test –scenario, include a SG rupture event requiring entry into EOP-5 and would test this knowledge?) RESOLUTION: The event tested here is significantly different from the simulator scenario event.	
80*	H	2										NO	Y	N	U	1. K/A is for Excessive Steam Demand event. Q is about TS for AC sources and PCP status. With or without 'concurrent steam line break outside Containment' in stem, the answer doesn't change! 2. All distractors have, 'LCO 3.8.1 is NOT met.' Remove 'not met because' from each distractor and add to stem before LCO 3.8.1 blank. RESOLUTION: Stem was revised to address TS LCO 3.4.3 and does not consider the loss of AC portion.	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
80R1													Y		U	The first part simply requires knowledge of the LCO which is not SRO only. Since the LCO is satisfied, the second part of the question doesn't mean anything. Choice "d" is the only one where the LCO is met. (DRM and DWR) RESOLUTION: The first part of the question was revised to select the appropriate EOP contingency procedure. The second part of the question modified slightly to create a 1 out of two taken twice format.
80R2	H	3										Y	Y	N	S	
81	H	2				X						Y	Y	N	E U	Delete 2 sentences after bullet in stem and add, "The Control Room supervisor directs entry into ..." RESOLUTION: Recommended change was made. AOP states "Refer to". Does this make entry into EOP-9 a requirement? YES DWR: Why isn't EOP-1 entry required? RESOLUTION: EOP-1 entry not required in Mode3. QUESTION WAS DELETED based on post exam comment resolution – Three potentially correct answers. After the detailed review of the post exam comment, the NRC agreed that based on the initial conditions stated in the stem of the question that answer choice (a) is the most correct answer, but that answer choices (b) and (d) cannot be ruled out as possible answers since the use of EOP-9 is discretionary and could be used in parallel with, or in lieu of, AOP-18.
82	F	3										Y	Y	N	E	Delete first sentence in stem since not pertinent to question. RESOLUTION: Recommended change was made.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
83*	H	4										NO	Y	B	U	<p>Doesn't match K/A! What affect does Loss of Offsite Power have on question? Repick to AA2.14. Suggest altering 1st choice from manual ops to method of DHR. 1st choice requires memory of equip affected by fire in FA-13, (beyond memory, use reference). IF testing memory, then ask operation of ASDVs. Stay away from 1/2 X 2 question!</p> <p>RESOLUTION: The loss of power is simply a reason for the scram and has nothing else to do with the question. Following discussion with the facility, concluded that question did match K/A since the applicant must analyze the limitations placed on the plant due to the fire location and implement a mitigation strategy.</p> <p>DWR: Memorization of manual operator actions seems beyond that required for a closed book exam.</p> <p>RESOLUTION: Determination of which manual operator action is appropriate can be determined by knowing which equipment is located within the affected fire area.</p> <p>No changes were made to the question.</p>
84	L	3				X						Y	Y	N	E	<p>DWR: Why is maintaining Pzr Level at program not applicable?</p> <p>RESOLUTION: Deleted the reference to the attachment titled "TAVE (from choice id=1r Level Prog</p>
85*	H	2				X						Y	Y	B	U	<p>Doesn't 1 hr requirement apply for PCP operation? IE: Restore offsite power and start at least one PCP in <1 hour?</p> <p>DWR: Seems to me that there is no correct answer. Tech Specs requires immediate restoration of at least one pump to operation.</p> <p>RESOLUTION: Due to uncertainties related to the interpretation of the associated LCO actions, a new K/A was randomly selected within the same K/A category and a Bank question associated with the newly selected K/A was chosen.</p>
85R	H(L)	2										Y	Y	B	S	
86	H	3										Y	Y	B	S	2010 NRC SRO EXAM
87*	H	3										NO	Y	N	U	K/A asks for 1) impact on RPS, (not for EP classification!) and 2) procedure to mitigate malfunction, (TS do not mitigate malfunctions!)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
87R1													NO		U	<p>DRM: Not SRO. ROs have to know the system and what actions should be taken – system level question.</p> <p>RESOLUTION: Due to uncertainties related to the technical accuracy of the answer and distracters, a new K/A was randomly selected within the same K/A category and a Bank question associated with the newly selected K/A was chosen.</p>
87R2	H	3										Y	Y	B	S	
88*	H	4				X						Y	Y	N	E	<p>Replace “Valve” with “Train” in the second part of each distracter.</p> <p>RESOLUTION: The use of the word “train” is not appropriate in the situation. Part 2 wording enhanced to make it clear that the valve alone does not mitigate the associated event.</p> <p>This does not need to be ½ twice question. Author can use combination of CT spray AND CACs for determination of ctm cooling operability!</p> <p>RESOLUTION: ½ Twice is OK; no other changes were made.</p>
89*	H	3										Y	Y	B	S	
90*	H(L)	2				X						Y	NO	N	U	<p>Not lower cog question since must know failure indication AND frequency of grab samples!</p> <p>DWR: Not SRO only. RO required knowledge Tech Specs eliminates choices ‘a’ and ‘b’. Then system knowledge eliminates choice ‘c’.</p> <p>RESOLUTION: A new K/A was randomly selected within the same K/A category and a Bank question associated with the newly selected K/A was chosen.</p>
90R	H	3										Y	Y	B	S	
91*	L	2										Y	Y	N	S	
92*	L	2										Y	Y	N	S	
93*	L	2										Y	NO	N	U	<p>NOT SRO only question since RO’s would know to enter reactor trip procedure after a reactor trip.</p> <p>RESOLUTION: A new K/A was randomly selected within the same K/A category and a NEW question associated with the newly selected K/A was developed.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
93R	L	3										Y	Y	N	S	
94*	H	3										NO	Y	B	U	K/A asks for, "Ability to perform specific system and integrated plant procedures.." TS are not system nor integrated plant procedures.
94R	H	4										Y	Y	N	S	RESOLUTION: A new K/A was randomly selected within the same K/A category and a NEW question associated with the newly selected K/A was developed.
95	H	2										Y	Y	B	S	
96*	L	2										Y	Y	N	S	
97	L	3										NO	Y	B	U	2010 NRC SRO EXAM This question is asking authorization requirements rather than asking for exposure limits per the K/A. Why include, "EI-2.1, Emergency Manager" procedure in stem of question? Can this question still be answered without this reference? Question was used for this K/A on 2010 ILT Exam. Look at references!!!
															S	RESOLUTION: OK as is
98	L	2										Y	Y	B	S	
99*	L	3							X			NO	Y	N	U	The first sentence of the question has nothing to do with the outcome of the answer but appears to be placed there in an attempt to comply with the K/A, which it does not meet. DWR: May match K/A, but actions are buried deep in procedure and should not have to be memorized (e.g., PCS pressure 50 vs 80 psig?) RESOLUTION: A new K/A was randomly selected within the same K/A category and a Bank question associated with the newly selected K/A was chosen.
99R	H	3										Y	Y	B	S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
100*	H	3											Y	Y	N	E	Move "within 1 hour" from distractors to question stem, last sentence after (1) blank. Move "within the next" from distractors into question stem after (2) blank. RESOLUTION: Recommended change was made.
# of flaws (%)				1 (4)		6 (24)			1 (4)				5 (20)	4 (16)			BANK = 10 (13) NEW = 15 (12) LCL/HCL = 9/16 UNSAT = 11 (44%) [9(36%)]
																	SAMPLES: No initial sample review was conducted. ALL questions were reviewed in detail.

Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
3. Check the appropriate box if a psychometric flaw is identified:
 - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - The answer choices are a collection of unrelated true/false statements.
 - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
 - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
 - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
 - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
 - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
 - The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
6. Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet 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 (E)ditorial enhancement, or (S)atisfactory?
8. At a minimum, explain any “U” ratings (e.g., how the Appendix B psychometric attributes are not being met).