

NRC COMMENTS TO OUTLINE AND INITIAL EXAM SUBMITTAL

INCLUDING ES-401-9 AND OPERATING TEST COMMENTS

FOR THE POINT BEACH INITIAL EXAMINATION - SEPT 2003

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
S01+	F	2				X									E	New. Change distractor A to refer to an UNUSUAL EVENT condition instead of an ALERT condition. <u>RESOLUTION</u> : Change made, but the EAL sheet will be provided to the applicants.
S02	H	3													S	New.
S03	H	3	X												E	New. Need to state in stem that all equipment operated properly following the SI. <u>RESOLUTION</u> : Comment incorporated.
S04	F	2													S	Bank.
S05	H	2													S	New.
S06	H	3				X									E	Bank. Change distractor B to EOP-1, Loss of Reactor or Secondary Coolant. Need to check other steps in E-0 to verify that E-1 is not the correct choice. <u>RESOLUTION</u> : Comment incorporated.
S07	H	2				X									E	Bank. 1) Add the following after stating the 5 plant conditions: The crew is implementing ECA-1.1, Loss of Containment Sump Recirculation. 2) Change distractor B to: 1 Accident Fan, 2 Spray pumps. <u>RESOLUTION</u> : Comment incorporated.
S08	H	2				X									S	Modified.

- Instructions**
[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]
- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
 - Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).
 - Check the appropriate box if a psychometric flaw is identified:
 - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - The answer choices are a collection of unrelated true/false statements.
 - One or more distractors is not credible.
 - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
 - Check the appropriate box if a job content error is identified:
 - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
 - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
 - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
 - The question requires reverse logic or application compared to the job requirements.
 - Check questions that are sampled for conformance with the approved K/A and those that are designated SRO-only (K/A and license level mismatches are unacceptable).
 - Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
 - At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

A "+" in the "Q #" column indicates that question was reviewed as part of the representative sample 30 questions.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
S09 +	H	1				X								U	New. 1) Include another initial condition that 1LI-426, PZR Level channel is failed low and the associated bistables are tripped. 2) Add another initial condition that all equipment is in its normal alignment. 3) Change distractor C to delete mention of 1LT-426 failing. 4) Get rid of "should" in choices. <u>RESOLUTION</u> : Comments incorporated.
S10 +	F	2												S	New.
S11	H	2				X								E	Modified. 1) Change stem condition from a containment pressure of 4.5 psig to 6 psig. 2) Change distractor A from less than 1 psig to less than 5 psig. <u>RESOLUTION</u> : Comments incorporated.
S12 +	F	2												S	New.
S13 +	H	3												E	New. Get rid of "should" in choices. <u>RESOLUTION</u> : Comment incorporated.
S14	F	2								X				E	Bank. If possible, question should be worded in a positive manner per NUREG-1021, Appendix B. <u>RESOLUTION</u> : Comment incorporated.
S15 +	H	2	X											E	New. Get rid of "should" in choices. <u>RESOLUTION</u> : Comment incorporated.
S16	H	2				X								E	Modified. 1) Add to stem after 1SW-2907 that all other ESF equipment operated normally following the SI actuation. 2) Change last sentence in distractor B to: The BOP should re-start 1P-14A and remain in Attachment A. 3) Change distractor C to add that "No Containment Accident Fan Coolers are operable" and to delete "The BOP should re-start 1P-14A". 4) Get rid of "should" in choices. <u>RESOLUTION</u> : Comments incorporated.
S17 +	H	3												S	New.
S18	F	2		X		X								E	Bank. 1) Change distractors A and C to add the words "without a loss of offsite power". 2) Change distractor D to "Main Steam Line break accident inside containment without a loss of offsite power." <u>RESOLUTION</u> : Comments incorporated.
S19	F	2												S	Bank.
S20	H	2												S	Bank.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
S21	H	2												S	Bank.
S22	F	2				X								E	Modified. 1) Change distractor A to say "racked in, the control switch is in Auto,, and breaker independently verified to be racked in. 2) Change distractor B to say "racked in, control switch is in Auto, and breaker was tested 28 days ago. 3) Add to distractor C that the control switch is in Auto. <u>RESOLUTION</u> : Comments incorporated.
S23	H	3	X											E	Modified. Add to stem: ". Impact, if any, ..."
S24	F	2												S	Bank.
S25	F	2												S	New.
R01	H	2												S	Bank.
R02	F	2												E	Bank. To ensure the K/A is satisfied, add to first plant condition that the small break LOCA is through a stuck open PZR PORV and block valve. <u>RESOLUTION</u> : Comment incorporated.
R03	H	2												S	Bank.
R04	F	2					X							E	Bank. 1) Distractor A could be considered correct in that boron precipitation is one form of a stratification layer. Add the word "thermal" before "stratification" in distractor A. 2) Add the word "reactor" before the word "vessel" in distractor C to make distractors C and D have similar wording. <u>RESOLUTION</u> : Comments incorporated.
R05+	H	2												S	New.
R06+	F	2												S	New.
R07	H	2				X								E	Bank. Change distractors A And D to 165 minutes and 180 minutes (in case the curve on page 6 is read instead of the curve on page 8 of Attachment C. <u>RESOLUTION</u> : Comment incorporated.
R08	H	2												E	Bank. Change from "Modified" to "Bank" question. <u>RESOLUTION</u> : Comment incorporated.
R09+	H	2	X			X								E	New. 1) Another plant condition required to state that all other equipment is in its normal alignment (since a difference in PZR level selector switch positions may alter the plant response)? 2) Add to the question: "Assuming no operator action,...", since operator action to address the malfunction would change the plant response. <u>RESOLUTION</u> : Comments incorporated.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
R10 +	F	2				X									E	New. Not required to memorize setpoints. List required parameters to check instead. <u>RESOLUTION</u> : Comment incorporated.
R11 +	H	2				X									E	New. Change distractor D to reference the discharge valves shut. <u>RESOLUTION</u> : Comment incorporated.
R12 +	H	1													U	Modified: LOD = 1. Distractor D is only plausible answer. Get rid of SI actuation in stem due to high containment pressure. Have a Main FW Pump Trip/Reactor Trip instead. <u>RESOLUTION</u> : Replaced question with a Modified question which was satisfactory.
R13 +	H	3				X									E	New. 1) Change distractor B word "take" to "turn" to agree with wording in distractor C. 2) Change distractor D to add at the end "and increase setting". Also, change distractor D to "Leave the 1T-1C control switch in AUTO" (for symmetry). <u>RESOLUTION</u> : Comments incorporated.
R14 +	H	3													E	New. Get rid of "should" in choices. <u>RESOLUTION</u> : Comment incorporated.
R15 +	F	2													E	New. In distractor A, delete the words "a separate" to make it look similar to distractor B. <u>RESOLUTION</u> : Comment incorporated.
R16 +	H	2				X									E	New. Add reason for the actions in distractors A and D to make them similar to distractors B and C. <u>RESOLUTION</u> : Comment incorporated.
R17 +	H	3													E	New. Get rid of "should" in choices. <u>RESOLUTION</u> : Comment incorporated.
R18 +	H	2													S	New.
R19	H	2													S	Bank.
R20 +	H	2				X									E	Modified. 1) To make the distractors more plausible, add to the stem that another control rod reads 10 steps, and the rest of the control rods indicate zero steps. 2) Change distractor D to state to add 3600 gallons boration since three control rods are not fully inserted. 3) Add the word "minimum" before the phrase "amount of boration". <u>RESOLUTION</u> : Comments incorporated.
R21	F	2				X									-E	Bank. To make distractor C credible, change say to borate using the SI pumps and the RWST. <u>RESOLUTION</u> : Comment incorporated.
R22	H	2				X									E	Bank. Change distractor A to say "can" instead of "must". <u>RESOLUTION</u> : Comment incorporated.

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
R23	F	2				X								E	Bank. Distractor B is not credible. Change to: Startup Hydrogen Recombiner to minimize potential for hydrogen burn (this was true for the WOG FR-Z.1 before this step was deleted a few years ago from FR-Z.1). <u>RESOLUTION</u> : Comment incorporated.
R24 +	H	2									X			E	New. If possible, question should be worded in a positive manner per NUREG-1021, Appendix B. For example: "Which ... would be expected to have a stable or increasing trend?" <u>RESOLUTION</u> : Comment incorporated.
R25	H	2												S	Bank.
R26 +	H	2												S	New.
R27 +	F	2												S	New.
R28 +	H	2												S	New.
R29 +	H	1												U	New. LOD=1. <u>RESOLUTION</u> : Replaced question with a New question which was satisfactory.
R30 +	H	2												S	New.
R31 +	F	2												S	New.
R32	H	2				X								E	New. 1) Distractor D is not credible to say to restart an SI Pump to restore RCS subcooling when subcooling is 200°F. 2) Get rid of "should" in choices. <u>RESOLUTION</u> : Comments incorporated.
R33	H	2												S	New.
R34	H	2					X							U	New. 1) Distractor B could also be correct if there is a tube leak in the letdown HX. 2) Typo in distractor D: "Radwast" to "Radwaste". <u>RESOLUTION</u> : Comments incorporated.
R35	H	2												E	New. Change from Fundamental to Higher Cognitive Level. <u>RESOLUTION</u> : Comment incorporated.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
R36	F	2					X								U	New. Distractor B could also be correct, since Pressurizer Vapor Space temperature would not change with a leaking PZR PORV and Block Valve. Change distractor B to : "Pressurizer Vapor Space temperature is rising". <u>RESOLUTION</u> : Comment incorporated.
R37	F	2													E	Bank. Add the word "RCS" before pressure in distractors A and B. <u>RESOLUTION</u> : Comment incorporated.
R38	H	2													E	Bank. 1) Delete the word "should" in the stem of the question. 2) Change from Modified to Bank, since need a pertinent item in the stem to be changed to call a question modified. <u>RESOLUTION</u> : Comments incorporated.
R39	F	2													S	New.
R40	F	2													S	New.
R41	H	3													S	New.
R42	H	2				X									E	New. 1) Distractor A is not plausible. Change to: The Condenser Steam Dumps will <u>NOT</u> open on a Loss of Turbine Load as long as the Steam Dump Mode Selector is in Auto. 2) Distractor B is not plausible. Change to: The Condenser Steam Dumps will open immediately. <u>RESOLUTION</u> : Comments incorporated.
R43	F	2													S	New.
R44	H	3				X									E	New. Distractor D is not credible. Change distractor D to "One Heater Drain Pump has tripped." <u>RESOLUTION</u> : Comment incorporated.
R45	H	2													S	New.
R46	F	2													S	New.
R47	F														U	New. None of the distractors are correct. Distractor A is NOT correct, since the Tech Spec LCO just says to initiate action to restore one AFW pump to OPERABLE status. It does not say that the reactor must be maintained at 100% power. Delete the word "must" in all distractors and reword. <u>RESOLUTION</u> : Comment incorporated.
R48	H	3													S	New.
R49	H	3					X								E	New. Distractor A refers to a Battery Breaker tripped open. Is this terminology correct? What breaker is this? Clarify breaker description. <u>RESOLUTION</u> : Comment incorporated.
R50	F	2													S	Bank.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
R51	H	3												S	New.
R52	H	3												S	New.
R53	F	2												S	New.
R54	H	2												S	New.
R55	F	2												E	New. Get rid of "should" in stem, if possible. <u>RESOLUTION</u> : Comment incorporated.
R56	F	2				X								E	Bank. 1) Distractor D is not plausible, since secondary depressurization will cooldown the RCS and tend to create a challenge to the INTEGRITY CSFST. Suggestion: Change distractor D to say: "To depressurize the RCS in order to prevent a challenge ..." 2) In distractor C, delete the words "all the" to make the distractor more plausible, since one can never remove all the stored energy in the Steam Generators. <u>RESOLUTION</u> : Comments incorporated.
R57	H	3												U	Bank. Information provided does not support verification of the correct answer. <u>RESOLUTION</u> : Replaced question with a New question which was satisfactory.
R58	F	2												S	New.
R59	H	2	X											E	New. Change the question in the stem to say: "....., which Power Range Nuclear Instrument channel has lost power." <u>RESOLUTION</u> : Comment incorporated.
R60	F	2												S	New.
R61	H	2				X								E	New. 1) In distractor C, change the "increased" to "initiated", since SFP cooling has been lost. 2) Get rid of "should" in stem. 3) Get rid of "should" in choices.
R62	H	2				X								E	New. 1) Get rid of "should" in stem. 2) Change distractor A from "IMP-IN" to "IMP-OUT". <u>RESOLUTION</u> :
R63	F	2												S	New.
R64	H	2				X								E	New. Distractor D is not plausible. Change to : Restart a Purge Exhaust Fan. <u>RESOLUTION</u> : Comment incorporated.
R65	F	2		X		X								E	New. Since there are two distractors with EDG in them, it provides a cue that one of them is the correct answer. Change distractor A to another area (e.g. Vital Switchgear Fan). <u>RESOLUTION</u> : Comment incorporated.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Backward	Q=K/A
R66	F	2											S	New.
R67	F	3				X							E	New. Get rid of "should" in stem, if possible.
R68	H	2											E	Bank. Change stem to specify an RCS pressure of 2400 psig instead of 2385 psig. <u>RESOLUTION</u> : Comment incorporated.
R69	H	3											S	Modified.
R70	F	2											S	Bank.
R71	H	3	X										E	Bank. 1) Get rid of "should" in choices. 2) In distractor C just say: "No postings are required." 3) In distractor D just say: "The PAB truck bay is required to be posted as a Very High Radiation Area." <u>RESOLUTION</u> : Comments incorporated.
R72	F	3				X							E	Bank. Change distractor B from 5000 to 4000. <u>RESOLUTION</u> : Comment incorporated.
R73	F	2								X			E	New. 1) Get rid of double negatives in stem. Change to : "would be considered a monitored release path". 2) Delete mention of PBF-3070. <u>RESOLUTION</u> : Comments incorporated.
R74	F	2				X							E	New. Change distractor C to Shift Manager. <u>RESOLUTION</u> : Comment incorporated.
R75	H	2											S	New.

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#	Source	Comment	Resolution
1.	JPM A.1	DELETE misalignment of Control Rod Bank Selector Switch, since this is not Tech Spec related or safety significant.	Comment incorporated.
2.	JPM A.1	Misalignment of 1RC-430 PZR PORV was used on the last NRC exam. Replace this with another misalignment.	Comment incorporated.
3.	JPM A.1	For SRO: Evaluate any Tech Specs NOT met and associated actions required. For RO: Discuss any Tech Specs NOT met.	Comment incorporated. To facilitate Tech Spec review, replaced misalignments on MCB with: 1) RHR Pump A - loss of control power 2) SI Pump B suction valve 1SI-896B closed 3) TD AFW Pump 1P29 SG A & B discharge valves closed (4000, 4001)
4.	JPM A.1	To Initiating Cue, add: When you are finished, we will discuss any discrepancies or problems, if any, noted.	Comment incorporated.
5.	JPM A.1.a	For Step 4, need final number for kW with an error band.	Comment incorporated.
6.	JPM A.2	Add to Initiating Cue: Charging Pump 2P-2C is to be disassembled for maintenance work.	Comment incorporated.
7.	JPM A.2	DELETE from Initial Conditions that the plant computer is down and SOMS is unavailable, since this is not required.	Comment incorporated.
8.	JPM A.2	Include an error in the sequence for the valve tagging (e.g. have the suction valve closed before the discharge valve which could lead to overpressurization of the suction piping if left uncorrected).	Comment incorporated.
9.	JPM A.3 (RO)	Use RWP survey form.	Comment incorporated.
10.	JPM A.4 (SRO)	Why isn't the classification of the event time critical (15 minutes)?	Comment incorporated. Classification of event was made time critical.
11.	JPM A.4 (SRO)	In the Initiating Cues, do not state which portion of the JPM is time critical. Only state that this JPM is time critical.	Comment incorporated.

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12.	JPM A.4 (SRO)	In the EPIP 1.1 given to the applicant, have Sections 5.0, 5.1, and 5.2 already signed as completed.	Comment incorporated.
13.	JPM A.4 (SRO)	For Performance Step 2, also designate items 5,6,and 7 of the NARS Form as Critical Steps.	Comment incorporated. In item 5, the EAL Number was made a Critical Step. Item 6 was made a Critical Step. Item 7 was made a Critical Step, with "airborne" required to be checked but "liquid" could also be checked as the type of release.
14.	JPM B.1.a	On the JPM outline, DELETE the Type Code of "L", since this JPM is performed at 28% power (i.e. not at 5% power or less).	Comment incorporated.
15.	JPM B.1.a	Add K/A values of 4.3/4.2 on page 1 of JPM.	Comment incorporated.
16.	JPM B.1.b	What is significance if an applicant incorrectly determines a value in Step 1, inputs values into HC-111 (Step 3) and HC-110 (Step 4) and starts the makeup (Step 7)? Should Steps 1,3, and 4 be Critical Steps, such that if performed unsatisfactorily, it would be the basis for a JPM failure?	No changes made. Examiner will have to evaluate if applicant changes values.
17.	JPM B.1.b	Step 3 - Add that the setting for HC-111 should be 40 gpm.	Comment incorporated.
18.	JPM B.1.b	Step 4 - Add that the setting for HC-110 should be 6.15 gpm.	Comment incorporated.
19.	JPM B.1.b	What is the "upper level" failure criteria for Step 9? Suppose level rises to 20% before placing the switch to STOP?	No changes made. Upper level failure criteria would be if VCT went to divert.
20.	JPM B.1.b	Why is Step 12 critical? What is the significance of leaving CV-111 open?	No changes made. If CV-111 is left open, then could have more primary water dilution flow during the next auto VCT makeup.
21.	JPM B.1.d	In the Initial Conditions, change sentence regarding balancing of charging/letdown flows to state: "RCP seal injection flow and charging/letdown flow have been balanced." This will make the Initial Conditions agree with step 5.1.5 of procedure OP 4B.	Comment incorporated.
22.	JPM B.1.d	Change K/A's for the JPM to 003A4.02 (2.9/2.9) and 003A4.03(2.8/2.5).	Comment incorporated.

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23.	JPM B.1.d	In Initial Conditions, change to "You are the Balance of Plant Operator for Unit 1".	Comment incorporated.
24.	JPM B.1.d	Step 2 - Add: Time: ____	Comment incorporated.
25.	JPM B.1.d	Step 9 - DELETE: "Less than 820 amps with RCS cold" and "Nominally less than 760 amps for anticipated plant conditions".	Comment incorporated.
26.	JPM B.1.d	Step 10 - Add: Time: ____	Comment incorporated.
27.	JPM B.1.d	Step 11 - Change "RCP 1A/B (2A/B)" to "RCP 1A" in two places to match MCB labeling.	Comment incorporated.
28.	JPM B.1.e	Should Step 6 be critical?	No changes made. . . If don't place in MANUAL and closed, would still get 200 gpm flow.
29.	JPM B.1.i	DELETE last sentence of Initiating Cue.	Comment incorporated.
30.	JPM B.1.i	On Turnover Sheet, correct typo in second sentence of Initial Conditions ("Hot Stanby" to "Hot Standby").	Comment incorporated.
31.	JPM B.1.j	Add to Initiating Cue that all initial conditions are satisfied in procedure OI-112.	Comment incorporated.
32.	JPM B.1.k	Steps 1 and 2 should not be critical, since part of Initial Conditions.	Comment incorporated.
33.	Scenario No. 1	Event 4 - Under Event Type, only the RO and SRO should be listed, since the RO takes the major action of placing the rods in MANUAL.	Comment incorporated.
34.	Scenario No. 1	At end of scenario, could be in an ORANGE path on INTEGRITY Critical Safety Function Status Tree. Change so that could go to either EOP-1.0 or FR-P.1.	Comment incorporated.
35.	Scenario No. 2	Event 1 - Page 1 - Change "RO" to "BOP" for re-establishing S/G B level at 64%.	Comment incorporated.
36.	Scenario No. 2	Event 2 - Page 1 - Recognizing the CCW Pump trip and manually starting the standby CCW Pump should be listed for the BOP instead of the RO, if the BOP is to be given credit for this malfunction.	Comment incorporated.
37.	Scenario No. 2	Event 1 (Steam Generator Pressure Transmitter 1PT-478 Fails High) is the same event that was used in Scenario No. 1 during the last NRC exam. Replace event.	Comment incorporated. Replaced event with a failure high of 1FT-474 steam flow channel.