

**NRC COMMENTS TO INITIAL EXAM SUBMITTAL**

**INCLUDING ES-401-9 AND OPERATING COMMENTS**

**FOR THE PALISADES INITIAL EXAMINATION - JULY/AUG 2003**

The first 25 questions are only on the RO Exam, the next 75 questions on both exams, and questions 101-125 are SRO ONLY questions. Q 1-10, 30-40, 101-111 for initial review. 100% of questions reviewed for clarity, KA conformance, & independent verification of references indicated.

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		
1N	H	2.0	x											US	No correct answer. Correct answer is to start available SW pumps. <i>Answer is correct for this station as written.</i>
2B	H	3.0										x		UE	EOP is required to answer the question, K/A requires use of ARM. <i>Modified Question to ensure ARM reference.</i>
3N	F	2.0	x											E	Add to stem, "initial power was stable at 100% for the last 30 days. <i>added</i>
4B	H	2.0												S	
5M	H	2.0												S	
6N	H	2.0	x											E	Add to stem: The plant was at 89% power <u>for 7 days</u> when ... Change stem to: <u>Two (2)</u> control rods will ... Reword question in stem to: What effect, if any, will the loss of the Wide Range NIs have on the Reactor Operator's ability to check the status of the Reactivity Control safety function? <i>Seven is correct. Two makes distractor b. correct Deleted 2nd reference to loss of wide range.</i>

## 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.
  - More than one distractor 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).

[illegible]

[illegible]



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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
60B	F	2.0												S	
61M	H	2.0												U	This should be a memory question taught this way in class. <i>Agreed.</i>
62B	F	2.0												U	This requires some diagnosis and prediction, making it higher order. May also have two correct answers depending on assumptions made by applicant (FW has responded -vs- FW hasn't responded). <i>Agreed</i>
63N	F	2.0												S	
64N	F	2.0												S	
65B	F	2.0												S	
66B	F	2.5												S	
67B	F	2.0												S	
68M	H	2.0												US	This appears to be simple memory. <i>Not taught this way in the classroom. Operator needs to assess to arrive at correct answer.</i>
69N	H	2.0												US	This appears to be simple memory. <i>Not taught this way in the classroom. Operator needs to assess to arrive at correct answer.</i>
70N	F	2.0												S	
71B	F	2.0												U	This appears to take some analysis (plant conditions) to answer. <i>Agreed</i>
72M	H	2.0												S	
73N	H	2.5												S	
74B	H	2.0			x									U	This appears to be a series of T/F statements. <i>Agreed. Re-written to require use of the stem to answer the question.</i>
75B	H	2.0												S	
76B	H	2.5												US	No reference for applicant, recall of interlocks and power supply vs right or left DBA sequencer operator (fundamental, memory) <i>Determined to be higher skill - not taught this way in class, reference being provided.</i>

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		
77N	H	2.5												U	Distractors are not consistent, c. and d. identify the reference, while a. and b. give setpoint and reason. <i>Agreed. distractors modified to be consistent.</i>
78B	F	2.5												S	
79N	H	3.0												S	
80B	F	2.0												S	
81M	H	2.0												US	Recall of precaution (fundamental) <i>Not taught this way in class. Operator has to assess conditions. Higher skill.</i>
82N	F	2.0												S	
83N	H	2.0										x		U	Stem does not require applicant to address KA part a) for predicting impact. Need to move the info for hydrogen burn and pressure spike into the possible choices. <i>Agreed. Modification made to correct question.</i>
84N	H	2.0												S	
85B	H	3.0												S	
86N	H	2.0												S	
87B	F	2.0												S	
88N	F	2.0												S	
89N	F	2.0		x										US	Reference page from GOP-2 is to be supplied to the applicant and there is no direction to refer or go to SOP-7, so what makes distractors a, b, and c believable? <i>Q matches K/A and is acceptable as is.</i>
90B	F	2.0					x							US	Why is c. incorrect? Distractor does not say the applicant will not record the new position. What would be wrong with recording the current valve position for information purposes? <i>Operators are taught to never record incorrect positions. Resolve, fix, then record the valve position.</i>
91B	H	1.0							x					U	LOD=1, LOK=F. Recall of specific interlock, synch scope interlock is always required to close this breaker regardless of plant conditions. Distractor b. is implausible, because it is never true. <i>Agree. Replacing the question, re-selecting K/A.</i>



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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
107N	H	2.0											x	S	
108N	H	2.5											x	US	Doesn't match the K/A. Doesn't match purpose or function. <i>Has to know purpose or function to arrive at the correct answer.</i>
109N	H	2.5											x	S	
110	H	2.5											x	S	
111N	H	3.0											x	S	
112N	F	2.5											x	E	Distractor d. should be changed to read "Less than 940 psia ..." <i>Agreed.</i>
113 M	H	2.0											x	S	
114N	H	3.0											x	S	
115B	H	2.0											x	U	May not be SRO ONLY, but they don't use ROs on refuel floor. May not be Higher, Immediate Actions are memorized. <i>Station does not use ROs on the refuel floor, SRO ONLY. Agree not higher.</i>
116B	F	3.0											x	U	TS entry conditions are not SRO ONLY. <i>Change to 2 hr tech spec, providing tech specs to make it SRO ONLY.</i>
117N	F	2.5											x	U	EOP/AOP entry conditions are not SRO ONLY. <i>Deleting K/A, reselecting to get K/A that can be used for SRO ONLY question. Replacing question.</i>
118 M	H	2.5											x	S	
119N	H	2.0											x	US	May not be SRO ONLY. ROs would know this information. <i>SRO ONLY at this station.</i>
120N	F	2.0											x	S	
121N	F	2.0											x	U	May not be SRO ONLY. ROs would know this information. <i>ROs may know information, but this is an admin function done by SROs.</i>
122N	F	2.0											x	U	May not be SRO ONLY. ROs should know this information. <i>Agree. Modifying the question to be SRO ONLY.</i>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
123N	F	2.5											x	S	
124B	H	2.0											x	S	
125B	H	2.0											x	S	
126															
127															
128															
129															

### Palisades Operating Test Comments

No.	Source	Comment	Resolution
1.	Scenario 1	<ol style="list-style-type: none"> <li>1) Outline gives credit for Instrument failure to RO for Event 3, "Hot Leg #1 RTD fails low." However, the scenario has no actions for the RO to take.</li> <li>2) On shift turnover, Add: "D/G is in Day 2 of 7 Day LCO."</li> <li>3) Event 1: After "acknowledges associated breaker trip alarm, add: "(1F and 1G only)."</li> <li>4) Event 3: Add (ARP-21) after first SRO action.</li> <li>5) Event 3: After "Bypass the Variable High Power Trip," add "(Trip #1); after "TM/LP Trip," add "(Trip #9)" in the first block of BOP actions.</li> <li>6) Event 4: First set of SRO actions, "Start Standby Service Water Pump," add "per SOP 15."</li> <li>7) Event 6 p2: Second RO instruction box, after "PZR spray valve" add: "(CV-1057)"</li> </ol>	<ol style="list-style-type: none"> <li>1) RO credit removed.</li> <li>2) Comment incorporated.</li> <li>3) Comment incorporated.</li> <li>4) ARP added.</li> <li>5) Trip descriptions added.</li> <li>6) Per SOP-15 added.</li> <li>7) Description added.</li> </ol>

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2.	Scenario 2	<ol style="list-style-type: none"> <li>1) Is the B S/G required to be isolated because of a ruptured tube? If so, why isn't the isolation of the B S/G (ruptured tube) a critical task?</li> <li>2) If the A S/G is isolated due to the open code safety and the B S/G is isolated due to ruptured tube, how is the plant to be cooled down?</li> <li>3) Delete Event 5 - too many events when combined with Scenario 1.</li> <li>4) Combine Events 7 &amp; 10 as Event 7. They are naturally grouped together.</li> <li>5) Event 4: Position ALL: add the following note to the bottom of the block: "Note: Refers to ONP-6.1, Control Rod Drop</li> <li>6) Event 4: 1st BOP reference: add trip channels to the description.</li> <li>7) Event 6: Second BOP reference: remove D/G 1-2 did NOT auto start.</li> <li>8) Event 8: 2nd RO reference: replace "Otherwise, acceptance criteria are MET," with "Acceptance criteria are NOT met."</li> <li>9) Event 9, Page 2, 1st SRO reference: replace "CA-1" with "CA-2."</li> </ol>	<ol style="list-style-type: none"> <li>1) Critical task added</li> <li>2) Decision by the SRO to un-isolate the A S/G.</li> <li>3) Event deleted.</li> <li>4) Events combined.</li> <li>5) Added Note.</li> <li>6) Trip channels added.</li> <li>7) Removed statement.</li> <li>8) Replaced statement.</li> <li>9) Replacement made.</li> </ol>
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### Palisades Operating Test Comments

3.	Scenario 3	<ol style="list-style-type: none"> <li>1) Events 1 and 2 should only count as one event.</li> <li>2) Event 6: 1st action: diagnose failure of feed flow transmitter LT-0703. LT-0703 is a level transmitter.</li> <li>3) Delete Events 4, 5 &amp; 6. Too many events when combined with Scenarios 1 &amp; 2.</li> <li>4) Modify description of Event 8 to include failure of manual trip.</li> <li>5) Add the following to the shift turnover: "T-53B was placed on long recirc by the previous shift per SOP-2A, 7.4.2.a.2, and boric acid sample results match the placard.</li> <li>6) Event 3: Add a small air leak to cause operator response to the event.</li> <li>7) Event 3: First block: add the expected annunciators.</li> <li>8) Event 7: Page 3: 5th RO response: at the end of the block add, "and/or containment temperature &gt; 125°F.</li> <li>9) Event 7: Page 4: 2nd RO response: insert NOT between the words "are MET."</li> </ol>	<ol style="list-style-type: none"> <li>1) Events are separate items performed by different operators. Left events as-is</li> <li>2) Feed was changed to Level</li> <li>3) Events deleted.</li> <li>4) Event 8 description modified.</li> <li>5) Initial condition modified.</li> <li>6) Small air leak added.</li> <li>7) Annunciators added.</li> <li>8) Comment added.</li> <li>9) NOT added.</li> </ol>
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### Palisades Operating Test Comments

4.	RO Admin 1.1	No Comment.	N/A
5.	RO Admin 1.2	No Comment.	N/A
6.	RO Admin 2	1) Task elements 19, 20 are not critical tasks as written.	1) Critical task requirements deleted.
7.	RO Admin 3	1) change the initiating cue to determine the "maximum" radiation dose expected.	1) Change made
8.	RO Admin 4	No comment.	N/A
9.	SRO Admin 1.1	1) At the end of the cue add, "to determine if there are any additional errors."	1) Additional cue material added.
10.	SRO Admin 1.2	1) Change the cue to add, "in minutes."	1) Change made
11.	SRO Admin 2	No Comment.	N/A
12.	SRO Admin 3	1) Change the initiating cue to determine the "maximum" radiation dose expected.	1) Change made
13.	SRO Admin 4	1) Add to the initiating cue: "This JPM is time critical." 2) Change initial condition 8 to "in progress." 3) Move initial comment from position 12 to position 9, re-sequence the remainder of the initial conditions.	1) Change made. 2) Change made. 3) Change made.

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14.	JPM B.1.a	<ol style="list-style-type: none"> <li>1) Have a working copy of RO-22 for examiner to provide to the applicant.</li> <li>2) Task Element 9: Annunciators sound at this point. Add annunciators to the JPM so they are expected by the examiners.</li> <li>3) Task Element 19: change the expected withdraw tolerance to 2.0" to 4.0"</li> </ol>	<ol style="list-style-type: none"> <li>1) Facility will have the worksheets available.</li> <li>2) Annunciators added to the narrative.</li> <li>3) Tolerance changed.</li> </ol>
15.	JPM B.1.b	<ol style="list-style-type: none"> <li>1) Task Element 6. Is it acceptable to have all three charging pumps running at one time due to maximum flow considerations?</li> <li>2) Step 1: Task refers to MO-2087, Standard refers to MO-2160.</li> </ol>	<ol style="list-style-type: none"> <li>1) This is done to make it easier to control PZR level. It is acceptable to run all three charging pumps at the same time.</li> <li>2) Typo. 2087 should be 2160. Change made.</li> </ol>
16.	JPM B.1.c	No Comments.	N/A

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17.	JPM B.1.d	<ol style="list-style-type: none"> <li>1) Add to the initial conditions: "Another Reactor Operator is controlling the reactor, auxiliary feed, and other portions of the control room.</li> <li>2) Task Element 8 should be a Critical Step.</li> <li>3) Task Element 12: Typos. Change "the" to "then" in items 2 and 3.</li> <li>4) Task standard on page 2 should be 530 rpm.</li> <li>5) Task Element 4: Step C1: after OVERVIEW, add, "or CONTROL</li> <li>6) Task Element 4: Step C2: add a note to the standard warning the examiner that other screens may be used to accomplish this task</li> <li>7) Task Element 4: Step C3: remove reference to TURBINE MANUAL and lamp extinguishes on manual panel</li> <li>8) Task Element 8: This is a critical step.</li> <li>9) Task Element 10: In the standard, this information is found on C-01, not C-03.</li> </ol>	<ol style="list-style-type: none"> <li>1) Statement added.</li> <li>2) Changed to critical step.</li> <li>3) Typos fixed.</li> <li>4) Task standard changed to 530.</li> <li>5) Change added.</li> <li>6) Change made.</li> <li>7) Change made.</li> <li>8) Agreed, changed to critical task.</li> <li>9) Agreed, changed to C-03.</li> </ol>
18.	JPM B.1.e	<ol style="list-style-type: none"> <li>1) Task Element 5: Change wording to ask applicant for suggestions on how to establish a reactor vessel head vent path.</li> </ol>	<ol style="list-style-type: none"> <li>1) Change made.</li> </ol>
19.	JPM B.1.f	<ol style="list-style-type: none"> <li>1) Delete "(i.e., do NOT perform steps f and g of SOP-16, 7.3.6)."</li> <li>2) Task Element 6: Change cue to: "If asked about any required action for P-52-A, tell candidate to follow procedures."</li> </ol>	<ol style="list-style-type: none"> <li>1) Facility agrees. Deletion made.</li> <li>2) Change made.</li> </ol>

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20.	JPM B.1.g	1) Add "Radwaste" in front of "panel C-40." to clearly specify the panel. 2) Task Element 9. Standard is a cue, not a standard. Remove cue. 3) Task Element 14: add the response procedure noun name 4) Task Element 15: this is not a critical task.	1) Facility agreed. Change made. 2) Facility agreed. Cue removed. 3) Facility agreed. ARI-8 added. 4) Facility agreed. Critical Task removed.
21.	JPM B.2.a	No comment.	N/A
22.	JPM B.2.b	No comment.	N/A
24.	JPM B.2.c	No comment.	N/A