

NRC COMMENTS ON THE OPERATING TEST AND THE

WRITTEN EXAMINATION - ES-401-9

FOR THE PERRY EXAMINATION - JAN/FEB 2003

Perry Station Operating Exam Comments

Administrative JPMs:

JPM A.1.a (RO) Evaluate Proposed Work Schedule Against Established Overtime Guidelines:

NRC:

Revise working hours to allow for two violation vice three.

LICENSEE:

Done.

JPM A.1.a (SRO) Evaluate Proposed Work Schedule Against Established Overtime Guidelines:

NRC: No comments.

JPM A.1.b (RO) Determine the Effect of Relay 1E51A-K51 Removal:

NRC: Electrical print reading is listed under Topic A.2 "Equipment Control" not Topic A.1 "Conduct of Operations" of ES-301, Section B.1.

LICENSEE: Used Generic KA 2.1.2.4 which is listed under "Conduct of Operations."

JPM A.1.b (SRO) Make a 4-Hour (10 CFR 50.72 Non-Emergency) Notification:

NRC: This is non-emergency notification.

LICENSEE: Safety significance is high RWL caused by Master FW Level Controller failed high. SRO has to determine if event is reportable based on planned vs unplanned. This is an SRO administrative function.

JPM A.2: (RO) Perform Independent Verification of Tag Placement:

NRC: No comments.

JPM A.2 (SRO) Controlling Containment Penetration to Meet the Isolation Requirements of TS 3.6.13:

NRC:

Add MCC disconnect designations.

LICENSEE:

Done.

JPM A.3 (RO/SRO) Determine Dress-Out Requirements for a Contaminated Area:

NRC: No comments.

LICENSEE:

RWP form revised due to procedure change, added additional items to protective clothing box.

JPM A.4: (RO) Perform Site Accountability Actions for Control Room Staff:

NRC: Simplistic.

LICENSEE: ROs have no other significant responsibility under the E-plan.

JPM A.4 (SRO) Issue a Revised Off-Site PAR Following a Change in Meteorological Conditions:

NRC: No comments.

System JPMs:

JPM B.1.a Withdraw Control Rod (Substitute Position):

NRC:

Add note on page 7 to identify intermittent ROD WITHDRAWAL BLOCK received.

LICENSEE:

Note added.

JPM B.1.b Manually Initiate SPMU (LOCA Logic Malfunction):

NRC: Doesn't appear to be alternate path, just follow sequential procedure steps. Replace JPM.

LICENSEE: The procedure has a note that skips the step for implementing the alternate path portion of the procedure. Once the operator identifies the correct response is not obtained, the operator is expected to return to the Note and implement the step that was initially skipped.

JPM replaced with Manual Startup of the Containment Vessel Cooling System (Fan B Low Flow)

JPM B.1.c Feedwater Injection Prevention (MFP FCV Malfunction):

NRC: No comments.

JPM B.1.d Remotely Transfer Bus EH12 to the Alternate Preferred Source From the Diesel Generator:

NRC: No comments.

JPM B.1.e Shift Reactor Recirculation Pump from Slow to Fast Speed:

NRC: No comments.

JPM B.1.f Shift EHC Hydraulic Pumps:

NRC: No comment.

JPM B.1.g Startup ARM to Full Operation:

NRC: No comment.

In-Plant JPMs:

JPM B.2.a Vent the Scram Air Header:

NRC: No comments.

JPM B.2.b Initiate Subfloor CO² from Outside Control Room:

NRC: No comments.

JPM B.2.c Level Control Using RCIC from the RSP:

NRC:

Change cue on page 8 to specify 4500 rpm and 0 gpm flow.

LICENSEE:

Done

Scenarios 2, 3, 4, & 5):

NRC Generic comments: What is the status of individual scenario ICs with respect to BOL, MOL, or EOL?

Licensee: IC19 is EOL (all rods out); IC35 is MOL; IC27 is MOL; IC16 is BOL.

Scenario 2:

NRC:

Event 1: Revise steps for transferring HPCI suction to match procedure.

LICENSEE:

Event 1 revised.

Scenario 3:

NRC:

Modify turnover to ensure crew will pull rods prior to making the mode change.
Add NLO report that the quantity of oil spilled will be about 1 gallon.

LICENSEE:

Modified turnover and added NLO report.

Scenario 4:

NRC:

Event 1, correct switch position.

Event 3, RFPT A lube oil temperature controller failure in AUTO mode. Doesn't appear to be good evaluation, not discriminating, all operator has to do is put controller in Manual and increase cooling flow. No impact on plant if lose RFPT because shutting down anyway. What is significance?

Event 5, add steps to include use of Master Level Controller.

Event 7, add additional information for examiners for SRO ordering reduction in RPV pressure band to reduce leak rate; include the BPVs as a control system; correct pressure band.

LICENSEE:

Event 1, done.

Event 3: Operator has to take action or else the pump will trip on high bearing temperature which will impact the plant.

Event 5, done.

Event 7, done.

Scenario 5 (spare):

NRC:

Event 3, include RO action to deselect the control rod.

LICENSEE:

Event 3, done.

ES-401-9

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		
2R	F	2												S	NEW
3B	H	2												S	NEW
7B	F	2												S	NEW
10B	F	2												S	MOD
12B	F H	2												S	MOD. NRC: LOK is fundamental. LICENSEE: Not a straight forward definition, must analyze conditions, number of control rods withdrawn, and rod position to determine answer. NRC: Agreed, LOK is High.
16B	H	2												S	NEW
23B	H	3												S	NEW
29R	H	2												S	NEW

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).

ES-401-9 WRITTEN EXAM REVIEW AND COMMENTS

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			
29S	F	2		✓											ES	NEW. NRC: Stem plant conditions not required to answer question. LICENSEE: Stem required because of info concerning SP level increase and loading do to LOCA. NRC: Agreed.
34B	F	2													S	NEW
40S	H	3													S	NEW
42B	H	2													S	NEW
48R	H F	+2													⊕ S	NEW. NRC: Too easy to identify "red" indication as being out of specification. Change distractor A to "A,B,C,E,F,and G." Get two new distractors for "B. and D." LICENSEE: If distractor changed as indicated, it would be partially correct and appealable. As is, applicant must know answer is based on the setting and not color. NRC: Agreed.
51B	H	2					✓								⊕ E	NEW. NRC: Asking subsequent action from a Alarm Response procedure. "D." is also correct answer. Reference doesn't support why "A." is incorrect. LICENSEE: Although ARP subsequent action is used to support the answer, the information is also based on system knowledge from lesson plan, and Caution in System Operating Instruction. Also have LO to support asking the question. "D." is not correct based on tense and wording "...will become inoperable when air pressure decreases to," but will add clarification that question is looking for the "instance when inoperability occurs." "A." is incorrect because the max pressure capability of P52 is 120 psig.. NRC: Agreed.
57B	H	3													S	NEW
76S	H	2													S	NEW
77R	F	2													S	NEW

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			
77S	H	3						✓							U S	NEW. NRC: Asking subsequent actions of an Off Normal procedure. Specific info part of lesson plan? LICENSEE: Although ONI subsequent action is used to support the answer, the information is also based on system knowledge from lesson plan and question does not require a quote of the procedure step. Applicant has to look at the responses to determine how to control a radioactive release. Applicants receive training based on the LO. NRC: Agreed.
78R	H	3													S	NEW
80R	H	3													S	NEW
81S	F	2													S	NEW
83R	H	3													S	NEW
84S	F	2													E	NEW. NRC: Reword stem "...describes the minimum authorization required..." What is the difference between the Unit Shift Supervisor and the Nuclear Shift Supervisor? LICENSEE: Will reword/enhance stem. The NSS is the term used at Beaver Valley per the notation "BV" in parenthesis.
85R	H	3													S	NEW
88R	F	2													S	NEW
89S	H	2						✓							U S	NEW. NRC: Per reference ONI-P54, Attachment 3, Step 5.1, distractor "A." could also be considered correct. LICENSEE: The fire is outside the Owner Controlled Area (OCA). Section 5 of the procedure clearly states within the OCA. No procedural guidance to direct the Fire Brigade outside of the OCA. Applicant training has clarified that only fires within the OCA are addressed by the FB. "A." would be incorrect. NRC: Agreed.

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		
90S	H	2											✓	U S	NEW. NRC: Distractors A and C list specific loads, change to "Bus" to match B and D. What makes this SRO only knowledge? LICENSEE: Both LP ECCS and XF1A are specific loads powered by the bus. It is the SRO's responsibility, not the RO's, to make the decision of which buses to energize based on initial conditions and in accordance with ONI-R10. NRC: Agreed.
94S	H F	2												E	NEW. NRC: Memorization of action is fundamental. LICENSEE: Agreed.
95R	F	2												S	NEW
97S	F H	2												S	NEW. NRC: Memorization of curve area is fundamental. LICENSEE: Need to know background information and TS bases, and apply that knowledge to the curve. NRC: Agreed.
1B	F	3												U S	BANK. NRC: No correct answer. Rod scram reactivity rate does not change ("A."). LICENSEE: "A." is not just looking at reactivity based on rods, looking at overall scram reactivity rate (see reference). NRC: Agreed.
2S	H	3												S	BANK (Perry 02)
4B	H	3												S	NEW
5B	H	2												S	NEW
6B	H	3												S	BANK
8B	F	3												S	NEW
9B	H	2												S	NEW
11B	H	3												S	BANK
13B	F	2												S	BANK
14B	H	3												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		
15B	F	3												S	NEW
17B	F	2												S	BANK
18B	F H	2							✓					S	NEW. NRC: Only need stem question, knowledge is fundamental. LICENSEE: Need stem info (DW temperature and pressure constant), rather than giving specific data, noted entry conditions. NRC: Agreed, LOK is high.
19B	H	2												E	BANK (Perry 02). NRC: What "low flow" causes the S/B fans to start? LICENSEE: Air flow, not low NCC flow.
20B	F H	2												E	BANK (Perry 02). NRC: Not a direct question, have to analyze the stem information. LICENSEE: Agree, LOK is high.
21B	F	3						✓						U S	BANK (Perry 01). NRC: Asking a subsequent action from an Off Normal procedure. Applicants trained on "preferred" meaning? LICENSEE: Although ONI subsequent action is used to support the answer, the information is also based on system knowledge from training and LO to support asking the question. "Preferred" in this case is based on one action that shuts the MSIVs and another that doesn't. Based on training the preferred method is not to shut the MSIVs. NRC: Agreed.
22B	H	2												S	BANK (Perry 01)
24B	F	2												S	BANK (Perry 97)
25B	H	2												S	NEW
26B	H	3												S	BANK (Perry 01)
27B	F H	2			✓									E S	MOD. NRC: Stem and curve not required to answer question. Fundamental. LICENSEE: The curve is meant to be used to provide the visual proof. ROs not trained to memorize the "reason." NRC: Agree, LOK is high, stem and curve provided to answer the question.

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		
28B	F	2												S	BANK (Perry 02)
30B	F	2												E	BANK (Perry 01)
31B	H	2												S	BANK (Perry 01)
32B	F	2												S	MOD
33B	H	2												S	BANK
35B	F	2												S	BANK (Perry 01)
36B	F	2												S	NEW
37B	H	2												S	BANK
38B	H	3												S	NEW
39B	H	2												S	BANK (Perry 97)
40R	H	2												S	NEW
41B	H	3												S	BANK (Perry 02)
43B	H	3												S	NEW
44B	F H	2												E S	NEW. NRC: Knowledge of interlocks is fundamental. LICENSEE: Dual solenoid valve, each with different power supply, not just inboard or outboard valves, or ½ twice trip logic. NRC: Agree, LOK is high.
45B	F	2												S	NEW
46B	H	2												U S	NEW. NRC: Reference indicates SRM high-high trip channels give trip with SLs removed. LICENSEE: SRMs at Perry always have shorting links (SL) installed, so there is no trip function. Applicants are trained that SLs are always installed, purpose of question is to verify that knowledge.
47B	F	2												S	BANK (Perry 01)

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			
48S	H F	+ 2													U S	NEW. NRC: No correct answer. What about INOP function? Too easy to identify "red" indication as being out of specification. Change distractors A and B to include "A,B,C,E,F,and G"? LICENSEE: Surveillance doesn't apply to INOP function (see reference). If distractor changed as indicated, it would be partially correct and appealable. As is, applicant must know answer is based on the setting and not color. NRC: Agreed.
49B	F	2													S	BANK
50B	H	2													S	BANK (Perry 02)
52B	F	2													S	NEW
53B	F	2													S	MOD
54B	F	3													S	NEW.
55B	F	2													S	BANK
56B	H	3													S	NEW
58B	F	2													S	NEW
59B	F H	2													E S	BANK. NRC: Knowledge of start sequence is fundamental. LICENSEE: Need to understand type of start based on the associated Diesel Generator response, and whether or not delay relay is used, and the delay time. NRC: Agree, LOK is high.
60B	F	2													S	BANK
61B	H	2													S	NEW
62B	F	2													S	NEW
63B	H	2													S	BANK
64B	H	2													S	BANK (Perry 01)

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		
65B	H	2												S	NEW
66B	H	3												S U	NEW. NRC: Reference material is not sufficient to support the identified correct answer. LICENSEE: Provided new reference material, BPV capacity is 30%. Also, no signal is generated to cause a RR FCV R/B.
67B	H	2												S	NEW
68B	H	2												S	NEW
69B	H	3												S	NEW
70B	H	2												S	NEW
71B	F	2												S	NEW
72B	F	2												S	NEW
73B	F	2												S	NEW
74B	H	2												S	NEW
75B	H	3												S	NEW
76R	F	2												S	NEW
79R	F	2												S	MOD
81R	H	2												S	BANK
82R	H F	2												E	BANK. NRC: Knowledge of interlocks is fundamental. LICENSEE: Agree, LOK is fundamental.

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		
84R	H	3	✓											U E	NEW. NRC: Stem informs applicant that loads are constant, but distractors are based on status of loads. Reference doesn't support answer. Is the question concerning the status before, or after the pot is adjusted? Need clarification. LICENSEE: The battery ammeter is looking at current in/out of the battery. The second part of the distractor makes it false, and is not part of the stem conditions. The "constant load" statement in the stem is required to make answer "B." the only correct answer. Will clarify that the question is asking "...after the float is adjusted." NRC: Agree.
86R	F	2												S	NEW
87R	H	3												S	NEW
89R 99S	F	3												S	NEW
90R 100S	F	2												S	BANK (Perry 02)
91R	F	3												S	NEW.
92R	H	3					✓						✓	U S	NEW. NRC: This appears to be SRO only knowledge (procedure change requirements). LICENSEE: ROs are trained and expected to write the correct type of procedure change request. SROs are expected to approve/disapprove same. NRC: Agree.
93R 98S	F	2												S	NEW
94R	F	2												S	BANK (Perry 02)
96R	F	2												S	BANK
97R	F	2												S	BANK (Perry 01)
98R	H	3												S	BANK (Perry 01)

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		
99R	F	2												S	NEW
100R	H	2												S	NEW
78S	F	2												S	BANK (Perry 02)
79S	H	3												S	BANK (Perry 02)
80S	H	2												S	BANK
82S	H	3												S	BANK
83S	F	2												S	BANK (Perry 02)
85S	H	3												S	BANK:
86S	F	2												S	BANK
87S	F	2												S	BANK
88S	F	2												S	MOD
91S	H	3												S	NEW
92S	F H	3												E	BANK (Perry 02). NRC: Need to analyze stem conditions, not fundamental. Why isn't B. also correct? LICENSEE: Agree, LOK is high. Water is relatively cold, won't give high DW pressure alarm.
93S	H	3						✓						U S	BANK. NRC: Asking subsequent action from a Alarm Response procedure. LICENSEE: Although ARP subsequent action is used to support the answer, the information is based on the concept of overriding a safety action, and is an appropriate issue based on the condition report provided as a reference. NRC: Agree.
95S	F	2												S	BANK
96S	F	2												S	BANK

	Higher	Fundamental	New	Bank	Modified
RO	$13+43=56$	$13+31=44$	$20+40=60$	$5+29=34$	$1+5=6$
SRO	$14+43=57$	$12+31=43$	$12+40=52$	$13+29=42$	$1+5=6$

First 30 questions selected for initial review.