Fitzpatrick Exam - 5/05

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OPERATING EXAM REVIEW COMMENTS

General Comments:

1. Make all applicant hand out material a different color paper including all cue sheets and reference materials.

2. Need to perform all items onsite to verify level of difficulty/discrimination validity.

3. **Licensee resolution comments in BOLD.**

Admin. JPMS

- Conduct of Operations: CTP Heat Balance Verification - no comments
- Conduct of Operations: Determine HPCI High RPV Water Level Trip Setpoint - no comments
- Equipment Control: Determine Plant Chemistry Tech Spec / TRM Compliance - no comments
- Radiation Control: Determine Visitor RCA Access Requirements - this JPM is an exception in that the candidate is not told which procedure to use.
- Emergency Plan: E-Plan Declarations after the Scenario 1, 2, 3 - no comments

Simulator JPMs

- Verify HPCI Isolation - no comments
- Group 1 Isolation Reset - Action 6, Evaluator prompt should be "The cause was not a high main steam line radiation signal." in response to the procedure step of "IF cause of ..."; Action 8, The step is "Ensure ..." and the Standard has the operator place the switches to close as opposed to verify the position and close if necessary. **CHANGED**
- Reopen MSIVs with RPV Pressurized - no comments
- CRD Pump Trip (Alt Path) - Action 7, would the candidate automatically scram the reactor, or would he/she expect the SRO to direct the activity after a report that additional accumulator trouble lights had been received? **Without SRO Direction**
- Swap Feedwater Level Control (Single to Three Element) - no comments
- Swap Electrical Buses from Reserve Station Service to Normal Station Service (T-4) - what is "LTC Control"?; Action 16 (a Critical Step), the procedure requires using the same hand, is procedure compliance in this case part of the Critical Step evaluation?
- ST-5D, APRM Calibration - attached copy of the surveillance procedure has "NR" in all the initial blocks of step 8.5.4 , what does this mean?; Action 17 of the JPM states that the candidate must simulate the adjustment, yet it is a critical step, how does the evaluator determine if the candidate properly adjusts the channel? **Actual Performance, not simulated**

In-plant JPMs

- Isolate and Electrically Disarm a Hydraulic Control Unit (HCU) - Action 4, how is the candidate supposed to "control" the amphenols? Should the candidate state that they

would be tagged before the evaluator states that the PTR is hung? **Will add some words regarding.....a tagout should be hung**

- Start Up Main Steam Leakage Collection - no comments
- Cross-Tie Fire Protection System to Inject to RHR Service Water - Action 4, is it assumed that the candidate has the N-1 key with him/her, does the evaluator already have the key, or is the candidate expected to obtain the key before going to the appropriate location? **Key is typically carried by operator or can be signed out**

Scenario #1 - Torus Rupture / ATWS, EOP-3/4/5 (IC - 100%)

1. pg 9 - report that torus water level is lowering, are there any annunciators that alert the operators to this condition? **Will add evaluator note for alarms**
2. pg 11 - the CRS directs restoring torus level with "B" loop of RHR; therefore, the SNO should order the NPO to open 10RHR-260 and not valve 274 ("A" loop). **Will Fix**
3. pg 11 - same comment to #2 above with respect to the following steps, only the "B" valves should be manipulated. **Will fix**
4. pg 11 - what would direct the operators to use OP-37? **Loss of dw/torus diff pressure**
5. pg 16 - the critical task standard is "-19 to 110 inches" but Critical Task #2 on pg 14 is to maintain "0 - 100 inches" Inconsistent. **-19 to +110 is correct**
6. pg 19 - similar comment to #5 above, Critical Task #4 (pg 18) is maintain "0 - 100 inches" but the standard is terminate injection when BIIT is exceeded ... maintain level "-19 to level at which reinjection is cued" Inconsistent. **(See above #5)**

Scenario #2 - SRV Tailpipe Leak in Torus, EOP-2/4/ED (IC - ~5%, plant s/u)

1. no comments

Scenario #3 - Seismic Event, AOP-31, MSL Break in TB (IC - ~75%)

1. there are only two critical tasks in this contingency scenario - is that sufficient? **OK for standby scenario**
2. pg 11 - what is the basis for the 200°F limit in the Critical Task #2 Standard? **Will add note to describe CT basis**

ES-401 Fitzpatrick Written Examination 5/05 Form ES-401-9

Written Examination Review Worksheet

SEE NOTES ON LAST PAGE

NOTE : 1. BOLD reflect resolution of comments

2. Reviewed by S. Dennis and H.Williams

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
1	H	2												S	
2	F	2												S	
3	H	2												S	
4	F	2												E	EDIT STEM TO READ ..".AS.. Reactor Power.....flow," **Edited**
7	F	3												S	
8	H	3												S	
9	F	2				X								U	1000 psig may be to high to be credible. Also if 1000 psig were correct *then 800 psig would also be correct.* **Major Edit or replacemnet**
10	H	2												S	
11	H	3												S	
12	H	2				X								U	Distractors not credible - **think** about this
13	F	2												S	
14	H	4												S	
15	H	3												S	Could be SRO only. Need to explain (talk) thru the explaination **There is an RO objective- OK - may use this a replacement for #70 and then randomly select another tier 1group 1 K3**
16	F	3												S	
17	H	3												S	
18	F	2										X		U	Was ok on last exam as a SRO only. K/A mismatch. **Will try and replace**
19	F	2				X								U	Use of condenser air removal pumps at power not credible **Changing stem from 100 to 10% power to make distractors more credible**
20	F	2												S	
21	H	3												S	
24	F	3												S	Verify pump discharge pressure is ok (vs. 200psig) - **ask herb?**

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
25	F	2												S	
26	H	3												S	SRO only - **there is an RO learning objective**
27	H	3												S	
28	H	3												S	Need to verify - **will verify on site**
29	F	2												S	
32	H	3												S	
34	H	3												S	
35	H	3												S	
37	H	3												S	
38	H	2												S	
39	H	3												S	
XX	xxx	xxx	xxx	xxx	xxxx	xxx	xxx	xx	xx	xx	xx	xx	xx	xx	xxxxxxxxxxxxxxxxxxxxxxxx
41	F	2												S	
42	F	2												S	
43	F	3												S	
44	F	3												S	
45	H	3												S	For KA - Not sure where "level" comes in? **Pressure increase, Collapsing of voids in downcomer, causes level to go down**
46	F	3												S	
48	F	2				X								U	How does NPSH come into play? **Will replace distractors regarding NPSH**
49	H	3												S	
50	H	3												S	
54	F	3												S	
55	F	2												S	
56	H	3												S	potential vs. no consequence "a" - **2nd part of distractor is false**
58	H	3												S	
61	F	2												S	
63	H	2												S	
65	H	3												S	
66	H	3												S	
67	H	2												S	

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68	H	2												S	
71	H	3												S	
72	F	2												S	
73	F	2												S	
74	H	2												S	
75	H	3												S	
76	F	2												S	Does applicant have TS 3.6.2.1 from another question? - **no**
77	H	2												E	Stem needs AOP-28 reference or "a" & "b" may be correct. - **Stem changed**
79	H	3												S	
80	F	2												S	
82	H	3				X								U	"c" does not appear credible (ATWS) - **C being replaced**
84	F	2												S	
85	H	3												S	
87	H	3												S	
88	H	3												S	
89	H	3												S	
90	F	3												S	
91	H	3												S	
92	F	2												S	
93	H	3												S	
94	H	2												E	Will edit stem - can actions be tied to procedure?
95	F	3				X								U	could "c" be correct also? **Will change C distractor**
96	F	2												S	
97	F	2												S	
99	H	3												S	
100	H	3												S	
SRO															
5	F	2												S	
6	H	*2*												S	*Need to correct explanation #s. What is 8.2.2?* **EAL Declarations - on Flow chart**
22	H	3												S	

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23	H	2												E	Use "Required" instead of "appropriate" in stem **Changed to required**
30	H	4												S	
31	H	3												E	"d"- both not needed. To get to safety limit you must exceed op. Limit **Removed Both and the MCPR Operating**
33	H	2												S	
36	H	2												S	**Barry - "Power, Pressure, & Level Control" implies EOP-3 and leads them to the answer.** **Barry - per the AOP, there would be yellow accumulator lamps, but there is not mention of them in the question** **PP&L are direction provided in both EOP-2 & EOP-3, therefore are appropriate for stem. Yellow accumulator light is not needed for correct answer**
40	H	3												S	NEED TO REVIEW REFs **Barry - I verified the references**
47	H	3												E	NEED TO REVIEW REFs **Barry - I verified the references** **Barry - need an explanation of answer A as to why the 10012 breaker is open, the question only mentions breaker 10312** **Barry - this is a memory/fundamental question, no analysis required.** **Changed to fundamental. Typo in explanation. Should be 10312 not 10012.**
51	H	3												S	Borderline SRO only **Barry - could find no reference to "Exosensor" in AOP-15 or OP-37** **Exocensor is H2O2 analyzer. SRO only since direction is provided to the operator**
52	H	2												S	"a" appears not credible and "b" & "c" very basic **SAT- based on discussion of EOP flow charts and required direction for level control.**
53	H	3												S	Review refs provided **Barry - I verified the references**
57	H	3												S	
59	H	3												S	
60	H	3												S	
62	H	2												S	

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		
64	H	3												E	Stem does not provide enough information to assume that an EOP-2 entry would not occur. Therefore answer B could be correct.. The answer must be based on procedural guidance for the given conditions. Barry - Steve, I used EOP-2 and walked through the procedure and it led me to EP-2 (copy of high-lighted procedure attached) *Weak distractors* **will replace "immediate" with "required procedurally driven" in question**
69	F	2												S	Borderline SRO ONLY - **based on correct answer interface with TS** *How is this ALARA?* - **provides commuication to staff to minimize dose**
70	F	1												U	Barry - seems too basic, not SRO only level question *process for preparing RWP vs. requirement for RWP* - **Will Replace**
78	H	2												S	**Core map position needs to be evaluated and SRM positions need to be evaluated - LOK=H is OK**
81	H	3												S	*Should TS and bases be provided for less than one hour actions?* **It is a 3.0.3 (1 hour call) however, given the question stem, 2 separate Tss must be evaluated**
83	H	3												S	Barry - referring to the ARP's listed in the question, I could not follow how the information given lead to the answer **AOP 9 refers to AOP-15 for correct answer**
86	F	2												S	Answer B could also be considered correct Barry - EN-OP-102 is not available to verify the answer which answer is correct Barry - the second page for this question is not attached **Use of the word "Intended" in stem precludes "B" as correct.** **Reference was reviewed -OK**
98	H	2	X											E	Is there enough stem focus to assure that an emergency doesn't exist, thereby making B also correct? **Will work on stem focus**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
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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.
   - One or more ~~than one~~ 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).

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. 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?

7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

NOTES:

Exam discussed with licensee on April 11 and 12, 2005. Out of 33 comments, 17 were resolved with no changes required. Unsats and Enhancements (3 noted below) will be resolved during validation week of April 18, 2005.

Total Unsat = 8
SRO Unsat = 1
Total Enhancements = 8
Total SRO Enhancements = 5