

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	2												N	S	
2	H	2												B	S	
3	H	3	X											N	E	Delete bullet about C/D via atmospheric dump valves.
4	H	3	X											B	E	Edit stem "Why?" Edit C –"three RCPs if they are needed"
5	F	2												B	S	
6	H	3	X											N	E	H vs F. Connect event and reason.
7	F	2	X											B	E	Make into a two part Q to match choices.
8	F	3	X				D							B	E	Delete first sentence and initial phrase in B&D.

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.
  - 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).
- 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).
- Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of ES-401 Section D.2.f.
- 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?
- At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

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9	F	2												B	S	H vs F
10	H	3	X											B	E	Provide breaker opening vs stating a LOOP occurred.
11	H	3												N	E	Change to state loss of instrument bus vs inverter..
12	H	3	X											B	E	H vs F. Re-word stem to make two sentences.
13	F	2												N	S	
14	F	2	X											N	E	F vs H. Remove personal pronoun in stem.
15	H	3												N	S	H vs F
16	H	2												B	S	
17	F	3												B	S	
18	F	2	X											B	E	Change to "What action is the crew directed to take"
19	H	3												B	S	
20	H	2												B	S	H vs F
21	H	3	X											N	E	Delete 5 <sup>th</sup> bullet – not true if N-35 undercompensated.
22	F	2												B	S	
23	F	2	X					X						M	E	Add "IAW..." Re-word Q to eliminate mention of CRS.
24	H	2												N	S	
25	H	2	X			C								N	E	Replace C. Delete RHR not injecting.
26	H	3	X			D								B	E	H vs F. Delete RHR injecting phrase. Replace D – similar to C.
27	H	3	X											M	E	H vs F. Delete common phrase in distractors.
28	H	2				C								N	E	Replace C.

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29	H	2												N	E	Reselect KA due to similarity with RO Admin JPM and simulator.
30	H	3	X											M	E	Clarify RCS leakage.
31	H	2				B								N	E	Replace / reword B – remove SIP 31.
32	H	3	X											M	E	Add "and what actions are required." Delete "increase" in D.
33	F	2				A,D								B	U	A & D not plausible – replace sump level with another parameter.
34	F	2												N	S	
35	F	3	X											N	E	Add IAW
36	F	3				D								B	E	Replace D
37	H	2												B	S	
38	F	2				D								N	E	Replace / reword D to be associated with P-10 or P-7
39	F	2												B	S	F vs H
40	F	3	X			C								N	E	Capitalize WILL/NOT; reword C
41	F	2												B	S	F vs H.
42	H	2	X			C								N	E	Edit 1 <sup>st</sup> bullet. Change answer key (D vs B) Replace C.
43	H	2				D								B	E	Add noun names. Replace D.
44	F	2	X			D								N	E	F vs H. Add IAW procedure. C & D lower power level.
45	F	2	X											N	E	Add "reactor power is." Replace "approximately" with "prior to"
46	F	2												N	S	
47	F	2	X											N	E	Add IAW.
48	F	3												N	S	

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49	F	2	X											B	E	Provide initial air pressure and use words from TS bases.
50	H	2	X											N	E	Delete 1 <sup>st</sup> sentence about LOOP.
51	F	3	X											B	E	Edit detector names to match reference
52	H	2	X											N	E	Fix 2 <sup>nd</sup> bullet. Replace 0 with a low value
53	F	2	X											N	E	Add IAW.
54	F	2	X											N	E	Change 110 to 105 in A & B.
55	F	2												N	S	
56	H	3												N	S	
57	H	2		X										B	E	Delete phrase about channels 1 and 2 in 2 <sup>nd</sup> bullet.
58	H	3	X											B	E	Add "Why or why not?"
59	H	2	X											N	E	Spell out QSPDS
60	H	2	X					C						B	E	Delete location of leak. Spell out ">" & "1". Add IAW. Add Cnmt rad.
61	H	3	X											B	E	Delete phrase about Press Mode.
62	H	2	X											N	E	Delete phrase about Tx power increase. A & B add COLR vs TS.
63	F	3	X											B	E	Edit stem. "Both" vs "each" KA does not match outline (misprint)
64	H	3												N	S	
65	H	3	X											N	E	H vs F. Specify point in time when looking at panel.
66	H	1	X											B	E	Edit stem so A is not so obvious.
67	F	3	X											N	E	Add EOL to stem.
68	H	4												N	S	H vs F.

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69	F	2												B	S	
70	H	2				C								B	E	H vs F. Replace C.
71	H	2												B	S	
72	H	3					D							B	E	Change D to ensure it is wrong.
73	F	3												N	S	
74	F	2												B	S	
75	F	3												N	S	F vs H
76	H	2	X											M	E	A & B add instrument flashing vs inaccuracy.
77	F	2										X		B	U	Not SRO only. Replace.
78	H	3	X											N	E	Edit stem to ask about AFW pump response. Delete needless phrase in B & D about AFW auto-start setpoint.
79	H	3	X											M	E	Edit stem to ask about subsequent operator action.
80	F	2	X											B	E	Add "Why or why not?" to stem. Add "in the RCS" to C.
81	H	3	X											B	E	Edit 8 <sup>th</sup> bullet. Capitalize ECA-1.1.
82	H	3											X	B	U	Not SRO only. Systems knowledge. Overhaul.
83	H	2	X											N	E	B & D replace PORV with SRV.
84	H	2	X											N	E	Re-work Q & provide other procedure choices.
85	H	2	X											B	E	Add loss of MCC. Edit Q for two part response.



## **Indian Point 3 Op Test Comments**

### Admin JPMs

General comment: review/narrow tolerances for calculations

- SRO A-1-1: Specify Unit involved (3)  
Provide basis in IC for Manual calculation and use of Attachment 2
- SRO A-1-2: No range needed in the calculation of CNMT volume
- SRO A-2: No comment
- SRO A-3: Need to provide units for noble gas concentration  
Need to provide R-27 set point
- SRO A-4: Confirm release status with applicants  
Correct JPM step 3 to reflect Part 1 Form  
Specify PAR for rest of the EPZ
- RO A-1-1: Provide graph book not just required graphs/tables  
Add cue to not use daily reactivity sheet  
Add cue to specify core burnup  
Specify reactor power vs MW(e)
- RO A -1-2: No comment
- RO A-2: There are no designated critical steps. Specify critical steps.  
Instruments past calibration date – change date in cue  
Procedure step 7.1 not signed off  
Table 6.1 error 5213 gpm vs 5210 for 32 SWP  
Procedure step 7.3 – SM signature before the peer check – change  
Provide peer review sheet  
Add valves to comment page
- RO A-3: Re-do data table/calculation for clarification  
Specify condenser in-leakage to 2.5 SCFU

### System JPMs

- Sim-1: Provide cue for preferred boration method  
JPM step 14 specify valve numbers  
Properly number JPM steps past 17  
Provide initial boron concentration  
End JPM after applicant determines boration time  
Change RCS temperature to be 535 F  
Add 142 seconds plus 34 minutes for required boration time
- Sim-2: Provide cue that containment sump level is increasing  
Provide cue that RO-1 has been completed

- Sim-3: Specify the Task Standard  
Delete cue to implement immediate actions  
JPM step 4 – specify PZR pressure instrument failed  
JPM step 5 – specify transition step to step 4.83  
End JPM at step 17
- Sim-4: Replace JPM with Initiate Feed and Bleed to the RCS
- Sim-5: Provide tolerances  
State that offsite power is available  
Specify the three fans are in service  
JPM Steps 11-14 need to cue for time compression.
- Sim-6: JPM step 9 – need for IV cue.  
JPM step 20 – cue for time compression  
JPM steps 21 & 22 – add details of procedure steps 1.18.1 and 1.19.1  
JPM steps 29 & 30 – add details of procedure steps 1.23.1, 1.24.1, & 1.24.2
- Sim-7: Provide IC that CRS has reviewed set points  
Provide note that key is in location 58  
Add substeps for entering/correcting data
- Sim-8: Provide details of doing voltage adjustment
- In-plant JPMs: Find K/A to link JPM to the appropriate safety function
- In-plant 1: Provide cue that SG pressure is 850#  
JPM step missing – procedure says that two valves are to be failed open.  
Need to assess applicants performing steps 4.1.8.7.a-e  
Correct steam inlet pressure vs discharge pressure  
Change air pressure at A/M station to force adjustment
- In-plant 2: Provide cue to ask about location and operation of switch in aux building
- In-plant 3: Specify the purpose of the task other than completion of steps  
Provide COL to the applicants if needed  
Provide cue that HP is accompanying  
JPM steps not critical since verified by COL



General comments: Clarify details of TS calls  
Specify criteria associated with critical tasks

#### Scenario 1

Event 3: Make severity of leak ~ 40% and ramped in over several minutes  
Add excess letdown valve numbers

Critical Task 2: Provide RCP trip criteria

Critical Task 4: Restart 31SI pump (additional CT if needed)

#### Scenario 2

Replace CFCU event

Add malfunction for ATC

#### Scenario 3

Events 5: Ramp in this malfunction (400 gpm/ 10 min)

Event 2: Typo – first BOP action “close” vs “closed”

Event 3: List valves required to isolate SG

Critical Task 2: Time frame for completion of SG isolation, if possible

#### Scenario 4

Event 2: No TS call for EDG failing test due to being OOS

Event 3: Credit CRS with TS call (TS 3.0.3)