

Exam: SONGS 2/3  
 Exam Date: SEPT 2000  
 Reviewer: R.E.LANTZ  
 Chief Examiner: Tom Stetka

INITIAL EXAMINATION DESK GUIDE APPENDIX E - REGION IV OPERATING TEST JOB PERFORMANCE MEASURE QUALITY REVIEW MATRIX											
JPM#	1. Dyn (D/S)	2. LOD (1-5)	3. Attributes					4. Job Content Errors		5. U/E/S	6. Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
Walkthrough JPMs											
J054S	D	2			6		✓			E	Check for similar KA for 2AO4 in Scenario 3, event 2.
J113FS	D	2			12					S	
J116FS	D	3			2		✓			E	Check for similar KA for N/C in Scenario 1, Event 8.
N152S	D	3			5					S	
J025FS	D	3			2					S	
J143S	S	2			3					S	Should be done in actual control room.
J049FS	D	2			✓					S	Step 3,6,7,22 do not appear critical. Explain why step 10 is critical
J004	S	3			19					S	Ensure time validation is appropriate
J019	S	3			21					S	Why is this task not time critical?
N153	S	1			1				✓	U	Lacks importance for a one step simple non-dynamic task, non-discriminating
J021	S	2			12					S	
Admin JPMs											
N169A	-	3					✓			E	Check with Scenario 3, event 4
N170A	-	2								E	Need student handout to evaluate task
N167A	-	2						✓		E	Does RO or I&C normally perform this task, step 3? Step 2 and or 6 may be critical.
N171A	-	1	✓			✓			✓	U	No apparent critical steps... task does not perform check of rad waste permit as written
J126S	-	2								E	Need to see SO123-VIII-10.3, step 6.1.2.2 to evaluate task
J154A	-	3								S	
J053S	-	3				✓				U	Same subject area as J154A in Section A.1. Not allowed per ES301.D.2.a.
N172A	-	2				✓		✓		U	System JPM, and not specific to reducing radiological hazard.

JPM#	Dyn (D/S)	LOD (1-5)	Errors							U/E/S	Explanation (See below for instructions)
			IC Focus	Cues	Critical Steps	Scope (N/B)	Over-lap	Job-Link	Minutia		
J157A	-	3								S	How is step 6 accomplished?

Instructions for Completing Matrix (Complete for either all items or all items requiring comment):

- Determine whether the task is dynamic (D) or static (S). A dynamic task is one that involves continuous monitoring and response to varying parameters. A static task is basically an system reconfiguration or realignment.
- Determine level of difficulty (LOD) using established 1-5 rating scale. Levels 1 and 5 represent inappropriate (low or high) discriminatory level for the license being tested.
- Check the appropriate box when an attribute weakness is identified:
  - The initiating cue is not sufficiently clear to ensure the operator understands the task and how to begin.
  - The JPM does not contain sufficient cues that are objective (not leading).
  - All critical steps (elements) have not been properly identified.
  - Scope of the task is either too narrow (N) or too broad (B).
  - Excessive overlap with other part of operating test or written examination.
- Check the appropriate box when a job content error is identified:
  - Topics not linked to job content (e.g., disguised task, not required in real job).
  - Task is trivial and without safety significance.
- Based on the reviewer's judgment, is the JPM as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
- Provide a brief description of problem in the explanation column.

Outline Review

Form ES-301-1 Admin outline

A.3, RO exam, looks like a system JPM

Form ES-301-2 Walkthrough Outline

RO and SROI,

Section B.1... Safety function 4, Primary Heat Removal, is repeated in the section. This is not allowed per ES-301.D.3.a

General JPM comments:

None of the JPM's require a dynamic control of a system parameter, such as elevating level in the SIT tanks, or manually controlling feedflow for a small power change, but are essentially locate and perform a valve/switch-lineup. Consider replacing several JPM's with dynamically challenging tasks.

Dynamic Scenario Review Comments:

In general, QA forms not filled out correctly. ES-301-5: Event numbers missing, not clear what numbers entered represent.  
ES-301-3... missing initials of facility reviewer, also, 3 Form 301-3's were submitted, not labeled according to Op Test number.  
ES-301-4.... missing one form to correspond with third ES-301-3.  
ES-D-2, Scenario Events, lacking detail in several instances... several I and C malfunctions, as described, require no significant action by operators, and would therefore not be counted as malfunctions. Estimate of boration/dilution amounts needed for power changes. No EDG or plant air problems, both very important in CE IPE.

#### Scenario 1:

Seems very linear with little challenge to the SRO to prioritize actions.  
Event 3a.. Loss of all annunciators, should be classified as an instrument failure.  
Event 3b... what actions are required? Looks minimal and non-discriminating  
Event 4... is not a major evolution, uses an abnormal OI, looks like only a communication drill, with no significant actions.  
Event 5... compare with Event 6 in scenario 2, very similar actions. OK if applicants do not perform scenario 1 and 2.  
Event 6... caused the major event, does not count separately as a component failure.

#### Scenario 2:

Looks like another instrument failure is needed for the ACO.  
Event 2... Any action required? Diagnosis only is not enough  
Event 4... not a major, reclassify as a component failure  
Event 7... Can't count as an instrument failure, more like a board awareness check. Also, the MSSV failure coincident with the trip is a complicating factor and does not count as a separate component failure.

#### Scenario 3:

Looks like another instrument failure is needed for the ACO  
Event 2... loss of 2AO4 bus... what actions are needed to be taken by the crew? Cannot be counted as a component failure as written.  
Event 3... only an alertness check, no discriminating action required by crew.  
Event 4 ... looks like it is the response due to event 2. What procedure is used for the shutdown?

## Instructions

[Refer to 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.
  - 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).
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. 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?
6. For any "U" ratings, at a minimum, explain how the Appendix B psychometric attributes are not being met.

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 REVIEWER: RE LANTZ

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
1	H	2					✓					E	Why is C wrong?
2	F	3										S	EDIT
3	H	3										S	
4	H	3										S	EDIT
5	F	2		✓								U	Same knowledge as #4
6	F	1						✓				U	GFES
7	F	1						✓				U	GFES
8	H	2					✓					E	
9	F	2										S	
10	H	3	✓									E	EDIOT
11	H	3										E	Same knowledge as #10, consider using #11 on both exams
12	H	3	✓									E	EDIT, B also correct as written, EDIT stem
13	H	3										S	
14	F	4										S	
15	F	2										S	
16	F	2										S	
17	H	2										S	
18	F	2										S	EDIT
19	F	3										S	
20	H	3										S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
21	F	2										S	EDIT
22	F	2		✓								U	Q#12 cues A,B. B also looks correct
23	F	2										E	EDIT, are C and D the same?
24	F	2										S	
25	F	3							✓			S	Consider replacing
26	H	3										E	B,C very similar, D not credible
27	H	4				✓			✓			U	infrequent/non discriminating
28	F	2							✓			U	Same as #27
29	H	2		✓								U	Q#13 cues this Q
30	F	2		✓								S	Another emergency boration Q? Justify not replacing
31	H	3						✓				U	Why RO only? Looks like SRO lvl
32	H	3				✓			✓			S	B not credible
33	H	3				✓						S	Are B,C,D valid actions after SPTAs?
34	H	3					✓					E	B,C may be correct
35	H	3										S	
36	F	2						✓				E	Why RO only? SRO lvl
37	H	3	✓			✓						E	C also correct? EDIT stem
38	F	4	✓				✓					E	Q is confusing, has SDC been lost? A appears correct also
39	F	2						✓				E	Why SRO only?
40	H	3						✓			✓	E	Why SRO only?
41	F	2				✓						E	EDIT D
42	F	3										S	
43	F	2										S	minor edit
44	F	2	✓				✓					S	minor edit, ensure distractors are incorrect?

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
45	F	2										S	
46	F	2		✓								U	This gives answer for Q#42.. Replace either
47	H	3	✓						✓			E	Why RO only? EDIT
48	H	3	✓						✓			E	Need lcs. Why SRO only? Answer is cued (only DC in answers)
49	F	3	✓									S	EDIT
50	F	3										S	
51	F	2										S	
52	H	2		✓								U	Q#31, #50 also test this subject, consider replacement
53	H	2										S	Verify BU heater status
54	F	3										S	
55	H	2										S	
56	F	4					✓					E	A looks correct, B, D may also be correct
57	F	4							✓			S	Is this component ID level req'd by memory?
58	H	2										S	EDIT
59	F	2										S	
60	H	3		✓								U	Several prior emergency boration Q's... delete this or Q#13
61	H	3										S	
62	H	3										S	
63	H	3				✓						E	Is it valid to say trip without a pretrip?
64	H	3										S	can operators see FCT? Check answer/wording
65	H	3	✓			✓						S	EDIT stem and A,B
66	H	2										S	EDIT
67	H	3	✓						✓			E	Clarify stem, possibly SRO only
68	F	3										S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
69	F	4										S	
70	F	4										S	
71	F	2		✓								U	Same as Q#21, replace
72	F	3		✓								U	Same as Q#49, replace
73	F	2						✓				E	Not SRO lvl
74	F	2						✓				U	Same as Q#73, combine to one Q for both
75	H	2						✓				U	GFES
76	F	2										S	
77	F	1						✓				U	This is best done in SIMULATOR, not WR Exam
78	F	3		✓								U	Same as Q#68, replace one
79	F	1						✓	✓			U	K/A value too low
80	F	1					✓				✓	U	Better to ask actions req'd, non-discriminating as given
81	H	2		✓								U	This was asked in prior Q#49 and #72
82	H	3										S	
83	H	3										S	EDIT distractors to logical order, 4/3/2/0
84	H	2						✓				U	Not SRO level
85	H	2		✓								S	Very similar to Q#84, combine to make one Q for both
86	F	3										S	EDIT format, DIST
87	H	3						✓				S	Why SRO only? Should be both
88	F	2					✓					E	EDIT dist A
89	F	2										S	
90	H	3										S	
91	H	3										S	
92	F	3										S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
93	H	3										S	
94	F	1							✓			U	Trivia, non-discriminating
95	F	2				✓						S	EDIT dist C
96	H	2										S	
97	H	2		✓								S	Same as Q#96. Combine to one Q on both
98	H	3				✓						S	Check valid terminology in dist D
99	H	3						✓				S	Not SRO only level
100	H	3		✓								U	Same as Q#91, delete
101	F	2		✓								S	Possibly cued by another Q, do SBO search
102	H	1						✓				U	GFES
103	H	2						✓				S	could be SRO only... any handouts?
104	F	3						✓				S	Not SRO only level
105	H	2										S	
106	F	2	✓									E	stem incomplete, EDIT
107	F	2	✓									S	EDIT stem
108	F	3	✓									S	check wording of stem, Unit 2/3 and....
109	F	2						✓				S	not SRO only lvl
110	F	1						✓				U	GFES
111	H	2						✓				S	not SRO only lvl
112	F	2	✓									S	EDIT
113	F	2										S	
114	F	3						✓				U	not SRO only lvl
115	F	3		✓								S	Same as Q#114, combine to one Q on both
116	F	3										S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
117	H	3										S	
118	F	1				✓			✓			U	Better asked on ADMIN section of exam, A, D not credible
119	F	3	✓									S	EDIT stem and dist B
120	F	2										S	
121	H	3							✓			E	Why RO only? SRO M
122													
123	F	2		✓								U	Same as Q#120, delete
124	H	3						✓				S	Check answer, verify D correct
125	F	4										S	minor EDIT
126	F	3							✓			S	Possibly SRO only
127	H	2										S	
128	F	2										S	
129	F	1							✓			U	GFES
130	F	2									✓	U	Better to ask, given and indication, what does it mean?