

15 UNSAT QUESTIONS

ES-401

Written Examination Review Worksheet Susquehanna 12/07

Form ES-401-9

Notes:

1. LOK listed is licensee's evaluation. NRC exception noted in explanation. If licensee's "H" correct, then may exceed 60%.
2. Resolution of comments is included in *italics*.
3. **BOLD** question numbers had a detailed technical review performed.

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			
1	H	3	X										Y	N	E	Should status of SV-15150 A/B be provided without this status A&C appear to be implausible? Added status of SV-15150A.
2	H	3		X											E	"C" is only distractor with outboard/outboard affected. Revised "D" inboard/inboard Stem: "...following describes which valves are affected by this loss..."
3	H	2											Y	N	E	Added to Stem: The field operator "reports that"...
4	F	2											Y	N	S	
5	H	3											Y	N	E	Provided status on 1A SLC pump
6	F	2											Y	N	S	F vs H
7	F	3											Y	N	S	
8	H	2											Y	N	E	Revise A. The IRM A detector...
9	H	2											Y	N	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		

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.
 - 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).
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)nsatisfactory (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).

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			
10	F	2											Y	N	S	
11	F	2											Y	N	E	"B" not plausible if you are trying to inject. There is no "control" by tripping Revised "B"
12	H	3											Y	N	E	wrong K/A listed on Q but Q is written to correct K/A listed on the exam outline (K1.04 vs A2.12 correct) Corrected typo on K/A
13	H	3											Y	N	E	Listed KA system
14	H	1-2											Y	N	E	Stem: "...completely reset and can be re-configured..." The valves must be manually opened after RESET? Done
15	F	3											Y	N	S	
16	L	2											Y	N	E	Capitalized "RELIEF" in answer choices.
17	H	3											Y	N	E	Corrected answer choices to list actual switch positions
18	H	2											Y	N	S	
19	H	2											Y	N	E	Stem: ...be entered <u>and</u> what is...
20	H	2											Y	N	S	
21	H	3											Y	N	E	Added procedure # and added to stem ...(<u>unbypassed</u>)
22	F	1-2									X		Y	N	U	Appears to be backwards logic. Not acceptable unless written at higher Cog level Q replaced with bank Q using same K/A.

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			
23	L	2											Y	N	E	Added to stem: "...much brighter than the "Negative (-)" light" rather than "other light"
24	L	2											Y	N	S	
25	H	3											Y	N	E	wrong K/A listed on Q but Q is written to correct K/A listed on the exam outline (K4.02 vs A3.01) Fixed K/A typo
26	H	3											Y	N	S	

27	L	2											Y	N	S	
28	L	2											Y	N	U	<p>Questions 28 and 29 very similar concept and questions. Suggest reselecting KA and new question.</p> <p>Resolution:</p> <p><u>Randomly selected 215001 A1.02 Ability to predict and/or monitor changes in parameters associated with operating the TRAVERSING IN-CORE PROBE controls including: Detector Position</u></p> <p><u>Modified an existing bank question</u></p> <p><u>TMOP078F/2316/1 (attached) to match KA.</u></p>

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		
29	H	2										Y	N	E	<p>K/A typo 201006 Fixed typo</p> <p>Stem: what is "fails low"? How low? Consider "downscale" Modified stem</p> <p>This question appears to test similar knowledge even though different system to Q 28. Replaced Q28</p>
30	H	2										Y	N	S	
31	H	1-2				X						Y	N	U	<p>K/A typo 219000 correct on outline Corrected K/A typo</p> <p>This Q is too easy and does not discriminate at the appropriate level LOD=1 also the distractors are not plausible. Even without the interlock it is not plausible to run the pumps with the suction valves not open Replaced with new Q using same K/A</p>
32	H	2		X								Y	N	E	<p>Stem: "...-129 inches and "the" action... "B" is the only choice that mentions "C" RHR pump auto starting maybe should add to another choice. Added C RHR pump to "A" also.</p>
33	F	4										Y	N	E	<p>Why is "C" main turbine will trip plausible? Recommend "Turbine load will increase" Replaced question with Bank # AD045/1357/64, good KA match.</p>
34	H	2										N	N	S	
35	H	3										Y	N	E	<p>Include K/A statement Added full K/A statement</p>

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			
36	F	2				X				X			Y	N	U	<p>looks like minutia without any references. Unless there is a valid LO may need to replace Q.</p> <p>Learning objectives are TM-OP-043-ST, Main Condenser Air Removal</p> <p>Air Removal System design features, and interlocks, including initiating signals, setpoints, automatic actions, and control logic, as applicable:</p> <p>a. Air Removal Steam Jet Air Ejector Shutdown signal (ARESD)</p> <p>b. Response to Off-Gas System isolation</p> <p>c. SJAE suction valve interlocks</p> <p>d. SJAE steam supply valves interlocks</p> <p>Given a set of plant conditions, including instrument indications, determine the Condenser Air Removal System response is correct for each mode of system operation.</p> <p>10338 Locate and describe the function of the following Condenser Air Removal System controls and indications:</p> <p>a. Mechanical Vacuum Pump controls and indications</p> <p>b. Motor operated valves controls and indications</p>
37	F	1-2			X								Y	N	U	<p>LOD=1 too basic for licensed operator exam basically purpose of Rad Monitors? Replace Q. Agree, reselected KA# 223001 K5.01 and selected Bank Question# TMOP059/10358/1</p>
38	F	2											Y	N	S	
39	H	2											Y	N	E	Stem add: "Select the <u>expected</u> response..." Done

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			
40	F	2											Y	N	S	
41	H	3											Y	N	S	
42	H	3				X							Y	N	E	Why is "D" plausible - added explanation to justification why plausible.
43	L	4	X			X							Y	N	U	A&B distractors don't seem plausible for Arm and Depress immediate actions when the first step in the procedure is Mode switch to s/d. Replaced with new Q using same K/A.
44	L	2						X					Y	N	E	Typo - Wrong K/A # and statement are listed should be 295016 2.4.50 from exam outline List LO - This SRV operation is an obscure note in Attachment D. KA corrected & LOs provided.
45	H	4											Y	N	E	Add to Stem: ...the following <u>describes</u> the RWCU.. Done.
46	F	2											Y	N	E	Listed K/A
47	H	3-4											Y	N	U	Overlap self-identified between this question and JPM on the operating exam. This new question modified.
48	H	3											Y	N	E?	The wording of the second bullet is confusing, recommend deleting word "coincidentally" and just say Due to refuel floor activities) Revised to add time line to clarify stem conditions.

65	H	4											Y	N	S	Note: EOP provided without H2 numbers in the that leg
66	H	2											Y	N	S	
67	H	2											Y	N	S	
68	F	3											N	N	U	K/A doesn't match also actual K/A statement not listed - ability to locate and operate components including local controls improve Level of difficulty Replaced Q with bank Q.
69	F	2											Y	N	S	
70	H	2											Y	N	S	
71	H	2											Y	N	S	
72	H	3											Y	N	S	1) Classify areas - How about Hi RAD area? 2) "A&C" not plausible employee #1 requires an extension with lower exposure than employee #2 who has higher exposure. 3) Also add word 'dose' after accumulated for employee #2. 4) H vs F Revised Q to address concerns
73	H	2											Y	N	E	Stem: add "Assume SPING rate does NOT increase as RCS is depressurized" Note: It would be reasonable for the applicant to "assume" the gap release increases as RCS pressure decreases. added release rate does NOT increase as RCS is depressurized"
74	F	3											Y	N	E	In "D" moved Reactor Shutdown Range to above Supp Pool Level (symmetry with other distr.)

75	H	1-2				X cred ?										U	<p>LOD=1-2, also distractors not plausible if know anything about EOPs perform all legs of 102 or enter and then exit 113 with 2 rods at position 48</p> <p>Based on EOPs only - No correct answer Per EO-101-102 would exit immediately to 113 before being directed to ON-100-101. The immediate SCRAM steps are in 113.</p> <p>Note: "B" may be in some OPS standard but is NOT supported by EOPs Replaced Q with modified bank Q using same K/A.</p>
76	H	2												Y	Y	E	Change 85% to 80% speed (avoid potential conflict with CAUTION (1) on page 4 Change made
77	H	4												Y	Y	E	Consider adding to stem all other ESW pums running. Done
78	H	3												Y	Y	U	<p>Looks like DLO for an SRO. EOP 103 directs to RPV flooding</p> <p>Can "fix" by adding "why is the action taken"</p> <p>If drywell temperature is "290 F (just below curve) and slowly rising" it will be more challenging for the SRO Replaced Q with modified bank using same K/A.</p>
79	H	3												Y	Y	S	Added Hi DW pressure to K/A statement

80	H	2				X Cred ?						Y	Y	U	Stem: add "The Unit Supervisor is implementing EO-100-102 RPV Control" Note: This would happen before reaching 38' A&B do not appear plausible given that 38' already exceeded and rapid depress reqd by step sp/L-14. Replaced with a bank Q testing same K/A.
81	H	3										Y	Y	S	
82	H	3										Y	Y	S	
83	H	2										Y	Y	S	
84	H	2										Y	Y	S	
85	H	3										Y	Y	E	Typo K/A 295017 - hi off site release rate Corrected
86	H	2										Y	Y	E	Typo in A, B, C, D change An to A Corrected
87	H	3										Y	Y	S	List system K/A. Done
88	H	3										Y	Y	S	
89	H	2										Y	Y	E	Stem: What <u>Unit 1</u> procedural entries are required? There will be some Unit 2 procedures entered. Done
90	H	3										Y	Y	S	List system K/A CCW. Done
91	F	2				X cred ?						Y	Y	U	Stem: ...Condition Report <u>and shall</u> "A&B" not credible to not dispatch Fire Brigade- May consider replacing Q since already have 2 Qs that test Fires. Replaced Q re-selected new K/A and used bank Q
92	H	2										Y	Y	S	
93	H	2										Y	Y	S	
94	F	2										Y	Y	E	List K/A # 2.1.14 Done

95	F	2												Y	Y	E	"A" implausible with 3 out of 4 instruments out of spec. Will revise Q to make 2 instruments in spec and 2 out of spec make more discriminating Change made
96	F	3		X										Y	Y	U	Don't like the vagueness of the situation. It would be a better Q if you could come up with some type of situation that was a little clearer. Also who would have to approve "B&D". Current Q is testing a situation out of normal process which is not normally test on initial exams. Replaced Q with bank Q that tests 50.59 review.
97	L	2												Y	Y	S	
98	H	3												N	Y	U	K/A mismatch + No correct answer Purging is not required for stem conditions. This is just a venting evolution "D" doesn't make sense "at least one train of SBT must be operable and it looks like you still have one train? Will revise/re-write Q to present a situation where purge is reqd. Replaced Q with bank Q that tests same K/A.
99	H	2												Y	Y	S	
100	H	5												Y	Y	S	

SSSES Written Exam Change Summary – 12/7/07

Change summary of post-submittal comments during telecons from 11/5/07 – 11/23/07

RO Exam Questions 1-75

Question #1

NRC Comment:

Need status of SV-151-F050 to ensure A&C are plausible.

Resolution:

Added "Maintenance reports that SV-15150A did not energize when the pushbutton was depressed."

Question #2

NRC Comment:

Enhancement to add "which" valves to the stem.

Potential cue in choice "C" for Outboard, Outboard.

Resolution:

Added "which valves are" for enhancement

Removed potential cue by adding an Inboard, Inboard choice to Choice D to balance Choice C and remove cue. This is still wrong and plausible.

Question #3

NRC Comment:

Enhancement "field operator reports that..."

Resolution:

Words added.

Question #5

NRC Comment:

Editorial on stem focus. For the SLC pump running, add "pump operating properly"

Resolution:

Words added "The running 1A SLC pump is operating properly within design limits."

Question #6

NRC Comment:

Question is Low Cognitive level

Resolution:

Agree, changed category to Low Cognitive.

Question #8

NRC Comment:

Enhancement to add IRM "A" to all choices.

Resolution:

Added words as suggested.

Question #11

NRC Comment:

Potential plausibility of Choice "B" If the valve fails closed, the second part to trip the RCIC turbine may be implausible.

Resolution:

Changed from fails closed to fails as-is, and then balanced choices to ensure the plausibility of B distractor. Issue corrected.

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Question #12

NRC Comment:

Typo on KA #.

Resolution:

KA verified and corrected.

Question #13

NRC Comment:

Add system to the generic KA statement.

Resolution:

System added.

Question #14

NRC Comment:

Editorial comment, add "and can be configured" or "reopened to align the system" that ensures a KA match to correct, control or mitigate.

Resolution:

Added words "Based on your actions above to this point, which of the following describes components that will be completely reset, i.e., ready to align and startup the system?"

Question #16

NRC Comment:

Enhancement, capitalize "relief"

Resolution:

"RELIEF" mode capitalized

Question #17

NRC Comment:

Is Select Level Selected a typo?

Resolution:

The switch is labeled SELECT LEVEL and correct. Words capitalized to reflect component. Changed words to "SEL" Level Selected and depress "1 ELEM"

Question #19

NRC Comment:

Add System to KA Statement

Editorial comment: Add AND

Resolution:

Added System.

Added AND.

Question #21

NRC Comment:

Enhancement: add surveillance/procedure step number

Resolution:

Added procedure section number and (Unbypassed)

Question #22

NRC Comment:

Backward logic question. Would be OK if at high cognitive level. Suggest replacement question. KA is OK.

Resolution:

Question replaced with bank question# TMOP088/1383/1

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Question #23

NRC Comment:

Editorial add Negative (-) instead of other.

Resolution:

Added Negative (-) light.

Question #25

NRC Comment:

Typo on KA #

Resolution:

Fixed KA#

Question #28

NRC Comment:

Questions 28 and 29 very similar concept and questions. Suggest reselecting KA and new question.

Resolution:

Randomly selected 215001 A1.02 Ability to predict and/or monitor changes in parameters associated with operating the TRAVERSING IN-CORE PROBE controls including: Detector Position

Modified an existing bank question TMOP078F/2316/1 (attached) to match KA.

Question #29

NRC Comment:

Typo on KA #

Editorial for fails low, suggest fails downscale

Resolution:

Replaced with fails downscale.

Question #31

NRC Comment:

Typo on KA#

LOD 1 easy question. Replace if possible. Consider new KA if necessary.

Resolution:

Fixed KA #

KA is acceptable. Replaced with new question.

Question #32

NRC Comment:

Editorial: add "and the action"

Balance C specific to RHR pump start

Resolution:

Added "and the action"

Added "C" RHR pump start to choice A to balance C and lengths equal.

Question #33

NRC Comment:

Choice "C" may not be plausible.

Resolution:

Replaced question with Bank # AD045/1357/64, good KA match.

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Question #35

NRC Comment:

KA Statement not complete

Resolution:

Added full KA statement

Question #36

NRC Comment:

Need a valid learning objective for this.

Resolution:

Learning objectives are TM-OP-043-ST, Main Condenser Air Removal

1239 Describe the following Condenser Air Removal System design features, and interlocks, including initiating signals, setpoints, automatic actions, and control logic, as applicable:

- a. Air Removal Steam Jet Air Ejector Shutdown signal (ARESD)*
- b. Response to Off-Gas System isolation*
- c. SJAE suction valve interlocks*
- d. SJAE steam supply valves interlocks*

1240 Given a set of plant conditions, including instrument indications, determine if the Condenser Air Removal System response is correct for each mode of system operation.

10338 Locate and describe the function of the following Condenser Air Removal System

controls and indications:

- a. Mechanical Vacuum Pump controls and indications*
- b. Motor operated valves controls and indications*

Question #37

NRC Comment:

Difficult to write good question on this KA. Question may not discriminate enough.

Resolution:

Agree, reselected KA# 223001 K5.01 and selected Bank Question# TMOP059/10358/1

Question #39

NRC Comment:

Editorial Add "expected response"

Resolution:

Editorial Add "expected response"

Question #42

NRC Comment:

Add explanation to choice D to show plausibility.

Resolution:

Explanation added for choice D.

Question #43

NRC Comment:

LOD 1 easy, suggest replacement

Resolution:

KA OK, replaced with new question.

SSES Written Exam Change Summary – 12/7/07

Question #44

NRC Comment:

Typo on KA

May need to provide valid learning objective

Resolution:

KA corrected.

Learning objective TM-OP-083-ST

1655 Describe the location, function and operation of the following Main Steam system components:

a. Safety / Relief Valves

10234 Locate and describe the function of the following Main Steam System controls and indications:

a. MSIV controls and indications

b. SRV controls and indications

t. Remote Shutdown Panel

Question #45

NRC Comment:

Add System

Add editorial comment “describes”

Resolution:

Added System and wording.

Question #47

NRC Comment:

None

Resolution:

Overlap self-identified between this question and JPM on the operating exam. This new question modified.

Question #48

NRC Comment:

Enhancement: recommend timeline to ensure stem focus.

Resolution:

Added timeline to stem to ensure even if “A” started, it will be tripped at t=1hr.

Question #49

NRC Comment:

Typo on KA #

Resolution:

KA # corrected

Question #50

NRC Comment:

Missing KA#

Resolution:

Added KA#

Question #51

NRC Comment:

Typo in choice C

Resolution:

Corrected typo in Choice C

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Question #55

NRC Comment:

Missing the word NOT in Choice B

Resolution:

Added "NOT" (appears to be inadvertently omitted when edited following validation)

Question #57

NRC Comment:

Editorial: Add High Offsite release following fuel degradation.

Resolution:

Added "high Offsite release following fuel degradation..."

Question #60

NRC Comment:

Add System to KA statement

Replace should in stem.

Resolution:

System added, should is now "properly overrides"

Question #62

NRC Comment:

Cognitive level is memory - LOW

Resolution:

Agree, changed cognitive level to LOW

Question #64

NRC Comment:

Missing KA #

Resolution:

KA # added

Question #68

NRC Comment:

Question overly detailed. Seems technically correct but maybe too administrative minutia.

Resolution:

Agree, much better questions, Replaced question with Bank Question# AD044/15315/18

Question #72

NRC Comment:

Minor plausibility concern with A, C since person with lower dose doesn't need a dose extension.

Enhance by adding high rad and locked high rad area.

Should be higher order cognitive level.

Resolution:

Revised question to remove one individual and add rad and locked high rad area.

Changed to high order cognitive level.

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Question #73

NRC Comment:

Editorial – Add Assume release rate does not increase as the RPV is depressurized.

Resolution:

Added words “Assume release rate does not change as the RPV is depressurized.” to stem.

Question #74

NRC Comment:

On Choice D, move Shutdown Range under Fuel Zone level.

Resolution:

Shutdown Range under Fuel Zone.

Question #75

NRC Comment:

LOD 1 seems easy

Resolution:

Replaced question with modified bank question# PP002/2680/2 (attached)

Question #76

NRC Comment:

Change running recirc pump speed to 80% to eliminate issue with remaining pump.

Resolution:

Changed stem to put both pumps at 80%. Note cannot be <80% since would make more than one answer correct.

Question #77

NRC Comment:

Consider adding bullet “All other ESW pumps are operable/available”

Resolution:

Added “All other ESW pumps are available.”

Question #78

NRC Comment:

With the EOPs, will be a direct lookup and really can't ask the question without EOPs.

Consider revising question.

Resolution:

Replaced question with modified bank question# PP002/2680/57

Question #79

NRC Comment:

Add System to KA#

Resolution:

Added System to KA#

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Question #80

NRC Comment:

Direct lookup at 38 feet. Doesn't discriminate at SRO level

Resolution:

Replaced question with Bank question# AD045/15307/1

Question #82

NRC Comment:

Add System for Fire

Resolution:

Added System to KA Statement

Question #85

NRC Comment:

Add system to KA Statement

Typo on KA

Resolution:

Added system and corrected typo

Question #86

NRC Comment:

Add system to KA Statement

Delete An

Resolution:

Added system and deleted An or A on choices.

Question #89

NRC Comment:

Add Unit 1 to stem.

Resolution:

Added Unit 1.

Question #90

NRC Comment:

Add system to KA Statement

Resolution:

Added system.

Question #91

NRC Comment:

Fire KA oversampled. Reselect and obtain new question.

Resolution:

Reselected KA# 215002 2.2.25 and Replaced with bank # TMOP078K/1544/2

Question #95

NRC Comment:

Suggest 2 in spec and 2 OOS to balance and raise difficulty

Resolution:

Changed to 2 in-spec and 2 out-of-spec

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Question #96

NRC Comment:

Stem focus issue, potential KA match; suggest replacing with standard 50.59 question

Resolution:

Replaced with bank question # NDAPQA0726/16, good KA match.

Question #98

NRC Comment:

KA match; some reverse logic

Resolution:

Replaced question with bank # TMOP073/1882/7

NO OTHER COMMENTS OR ISSUES NOTED.

 11/29/07

C. Michaels
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Susquehanna Operating Exam Review Comments

JPMs

General Notes - 1) Check overlap with Scenarios 2) Horizontal formatting may be difficult to use especially for in-plant JPMs, please revise to vertical format at least for 3 in-plant JPMs; 3) Which one of the SROU are you taking credit for as an ESF system?; 4) Only one new and or modified JPM in list criteria requires at least 2 or greater; 5) Make sure you script clearly required call backs to booth operator for sim JPMs especially those that we may perform in pairs.

Scenarios

General:

Each scenario has at least the minimum number of Attributes and the Major events (with one exception, seem fairly challenging. How this all “stacks up” as a valid exam is a function of which scenarios each applicant is subjected to. I would need to see their proposed schedule before I could do a holistic assessment.

The scenarios aren't much more than outlines and much of the operator-action detail is contained in the attached, applicable procedures. This satisfies NUREG-1021, Rev 9 but means we (examiners) will need to do considerable preparation immediately before administering the exam. We will need to highlight specific steps in the attached procedures that are performed by the applicant we are grading and make notes on important actions to be taken/observed.

Specific:

Scenario ILO-604

The 250 V DC malfunction is mainly a TS call for the SRO. Doesn't look like any meaningful actions by the RO or BOP. Incidentally, this appears to be 1D264, not 1D274. Looks like RCIC is also affected and the SRO needs to do an OPERABILITY EVALUATION for RCIC.

The swap of the CRD pumps is so easy/basic it should not “count” as a “bean”.

The power decrease of 100 Mwe , starting at 100 % power is too simple. It would be a

The last two Major Events (Steam Leak and ED) may "play out" as a single event if/when the SRO concludes the radioactivity release will "drive him" into ED. He may "anticipate ED" and take appropriate actions fairly early on.

The SRO should recognize that ED will put a lot of activity into the suppression pool and will affect numbers of areas in Rx Bldg. He should order evacuation of the entire Rx Bldg before ED.