NRC COMMENTS TO THE WRITTEN EXAMINATION - ES-401-9

AND FACILITY CHANGES BASED ON THE NRC REVIEW

FOR THE D. C. COOK EXAMINATION - NOV/DEC 2002

ES-401

Written Examination Review Worksheet

Form ES-401-9

The first 30 questions were used to satisfy the requirements of the preliminary review, all questions were reviewed by the Region.

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/M	2.5											x	U	ROs would be required to know this. *Changed to RO/SRO.*
2	H/N	2.5												E	distractors b, d - repositon is spelled reposition
3	H/M	2.5											x	S	
4	H/N	2.0												E	following used twice - reword
5	F/B	2.0												S	
6	H/M	2.5												S	
7	F/B	2.0												S	
8	F/B	2.0											x	E	PRZ should be PZR
9	F/B	2.0												E	move "The discharge rate will . . ." to the stem
10	F/B	2.0												S	

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.
   - 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. 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).

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		
11	F/B	2.5												S	
12	F/B	2.0												S	
13	H/B	2.5												E	Threwe should be "the"
14	H/N	3.0											x	S	Does the "and stable" apply to all SGs?
15	F/B	2.0												S	
16	F/M	2.5												S	
17	H/N	2.5											x	E	A 800 should be An 800
18	H/N	3.0											x	S	
19	H/B	2.5												S	
20	H/N	2.5												S	
21	H/M	2.5												S	
22	F/B	2.0												E	Distractor d. has "the the" remove one "the"
23	H/B	2.0												S	
24	F/B	2.0												S	
25	H/N	2.5											x	S	
26	H/B	2.5												E	Only one train.... are.... should be only one train is
27	H/N	2.5											x	S	
28	F/N	2.0												S	
29	F/M	2.5												E	Controler should be controller
30	F/N	2.5												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		
31	H/B	2.0												S	
32	H/M	2.5												S	
33	F/N	2.5												E	sepoint is setpoint, leakrate should be two words "leak rate"
34	F/B	2.0										x		U	Q does not match KA. *Replaced*
35	H/M	2.5												S	
36	H/N	2.5												S	
37	F/B	2.0												S	
38	F/B	2.5												S	
39	H/N	2.5											x	S	conditons is conditions
40	F/M	3.0											x	S	
41	F/M	3.0											x	U	Not SRO Only, RO should be able to answer *Changed to RO/SRO*
42	H/N	3.0												S	
43	H/M	3.5												S	
44	F/B	2.0												S	
45	H/B	2.5											x	U	Not SRO Only, Ro should be able to answer *T.S. decision - not RO*
46	H/N	2.5												S	
47	H/M	2.5												S	
48	F/N	2.0											x	E	Place ? at the end of the question
49	F/M	3.0										x		U	doesn't meet "and" condition of KA, may not be RO *Reworked Q.*
50	H/B	2.5										x		U	doesn't meet (b) of the KA continously is continuously *Reworked Q*

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		
51	H/N	2.0												S	Are we going to do this during the dynamic scenarios? *no - acceptable*
52	F/B	2.0												S	
53	F/M	2.0												S	
54	F/B	2.0												S	
55	H/N	2.0												S	
56	H/N	2.5												S	
57	H/B	2.5												S	
58	F/B	2.5												S	
59	F/B	2.0												S	
60	H/B	2.5												S	
61	F/N	2.0												S	
62	F/N	3.0												E	Arrangment is spelled arrangement
63	F/B	3.0												S	Contaiment is spelled containment
64	H/N	3.0												S	decribes is spelled describes
65	F/N	2.0												S	
66	F/B	2.5												S	
67	H/B	3.0												S	
68	H/N	2.0												S	
69	F/B	2.5												S	
70	H/N	2.5												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		
71	F/M	2.5												S	
72	H/N	2.0												S	decribes is spelled describes
73	H/B	2.5												S	
74	F/B	3.0												S	stabilzed is stabilized / sucessfully is spelled successfully
75	F/M	2.0												S	in REFERENCE, Effleuent is spelled Effluent
76	H/B	3.0												S	
77	F/M	2.5												S	
78	F/N	2.0												S	
79	H/B	2.0												S	
80	H/M	2.5												S	
81	F/M	2.0												S	
82	F/M	2.5												E	"to equalized" should be "to equalize"
83	H/B	2.0												S	
84	F/N	2.0												S	
85	F/M	2.5												S	
86	H/N	2.6												S	check distractor d. and formatting *OK*
87	H/N	2.0												S	
88	H/M	2.0												S	fo is of
89	H/N	2.5												S	
90	H/B	2.5												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		
91	H/N	2.5												E	contol is spelled control
92	H/B	2.0												S	
93	H/N	2.5												S	
94	F/B	2.0												S	
95	H/N	2.0												S	
96	F/B	2.5												S	
97	H/N	2.5												S	
98	H/M	2.5												S	
99	F/B	2.5												S	
100	H/N	2.5												S	
101	H/N	2.5												E	"heat echanger" should be "heat exchanger"
102	H/N	2.5											x	S	in the reference - instumentation is instrumentation
103	F/N	2.5												S	
104	H/N	2.5												S	
105	F/M	2.5												S	
106	H/N	2.0												S	
107	F/N	2.0												S	
108	H/N	2.5												S	
109	H/N	2.0												S	
110	H/N	3.5												S	

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
111	H/N	2.0											x	S	
112	H/M	2.5												S	
113	H/N	2.5											x	S	
114	H/B	2.5												S	
115	F/N	2.0												S	
116	F/B	2.5											x	S	
117	H/N	2.5											x	S	
118	F/B	2.0												S	
119	H/M	2.5												S	
120	H/M	2.5											x	S	
121	F/M	2.5											x	S	
122	F/M	2.0												S	
123	H/M	2.5											x	S	intiate is initiate
124	F/N	2.0												S	
125	F/N	2.5												S	
126	F/N	2.5												S	delete first ? mark. distractor c. - suppresion is suppression
127	H/B	2.5											x	S	
128	F/B	2.5												S	

November 4, 2002

TO: Dell McNeil, NRC Region III Examiner

SUBJECT: DC Cook 2002 NRC Final Exam Submittal

Enclosed you will find a copy of the Initial License Examination for the planned November/December 2002 Examination at DC Cook Nuclear Station.

These items have been changed as discussed during the NRC Validation Week. The changes are listed on the change sheets attached to each package. Those items identified by the NRC are denoted "NRC Validation Comment" under the reason column.

For the Written Examination please note that Questions 9, 34, 49, and 50 have had substantial changes based on NRC feedback.

The following items are enclosed in the sealed envelope:

1) Scenario Change Sheets and Exams
   a) COOK02-01.doc
   b) COOK02-02.doc
   c) COOK02-03.doc
   d) COOK02-04.doc
   e) COOK02-05.doc
   f) COOK02-06.doc
2) System JPM Change Sheets and Exams
   a) N02-01.doc
   b) N02-02.doc
   c) N02-03.doc
   d) N02-04.doc
   e) N02-05.doc
   f) N02-06.doc
   g) N02-07.doc
   h) N02-08.doc
   i) N02-09.doc
   j) N02-10.doc
   k) N02-11.doc
   l) N02-12.doc
   m) N02-13.doc
   n) N02-14.doc
   o) N02-15.doc

3) Admin JPM Change Sheets and Exams
   a) N02-A1a.doc
   b) N02-A1b
   c) N02-A2.doc
   d) N02-A3.doc
   e) N02-A4.doc
   f) N02-A5a.doc
   g) N02-A5b.doc
   h) N02-A6.doc
   i) N02-A7a.doc
   j) N02-A7b.doc
   k) N02-A8.doc
   l) N02-A9.doc
   m) N02-A10.doc
4) DC Cook 2002 NRC Written Change Sheet and Examination (128 questions)

A hard copy of all the examination materials is provided for your review. An electronic copy of documents without initials or signatures or other handwritten notations for the Public Document Room (ADAMS) has also been provided.

None of these materials are to go to the Public Document Room (ADAMS) until after the examination has been completed.

If you have any comments or concerns, please contact Ted Werk at (269) 466-3364 or myself at (269) 466-3407.

Sincerely,

Ronald (Mick) Brown

Ronald (Mick) Brown
Operations Training Manager
AEP, DC Cook Nuclear Station

Admin JPM N02-A1a Changes

Change	Reason
Added IC number and specific pumps to simulator setup.	Ensure consistent setup.

Admin JPM N02-A1b Changes

Change	Reason
Added IC number to simulator setup.	Ensure consistent setup.
Changed requested Setup in Briefing and body to audible every 5 seconds vs. 30 seconds.	More realistic expectation.

Admin JPM N02-A2 Changes

Change	Reason
Added Print to required handout section.	Unit 1 print not available in simulator.

Admin JPM N02-A3 Changes

Change	Reason
Changed time to 25 minutes from 20 minutes.	NRC Validation Comment: Time based on locally checking valves vs. paperwork.
Added Notes to have evaluator record start times on paperwork..	Ensure paperwork is realistic.
Added step on page 2 to allow candidate to check locally closed valves.	NRC Validation Comment: Operator may prefer to check valve vs. paperwork.
Added Cues that Independent verification is complete on steps where required.	NRC Validation Comment: Evaluator requested.
Changed Cues from Control Room to include specific notifications on page 2 and make two cues on page 4.	NRC Validation Comment: Make cues easier to read.
Added cues feedback for Switch, DAM light, and recorder	NRC Validation Comment: Provide feedback to candidate to enhance realism.

Admin JPM N02-4 Changes

Change	Reason
Added note to Evaluator's briefing section that this is time critical JPM.	NRC Validation Comment: Ensure candidate briefed on time critical JPM.

Admin JPM N02-5a Changes

Change	Reason
Added IC number and specific pumps to simulator setup.	Ensure consistent setup.
Changed Paperwork to complete common items not identified in JPM	Ensure paperwork is realistic.

Admin JPM N02-5b Changes

Change	Reason
Added ruptured and bubbling to dropped assembly to briefing.	NRC Validation Comment: Ensure procedure is applicable.
Added note that someone else will perform E-Plan Classification.	NRC Validation Comment: Allow candidate to focus on required task.
Added "directs AEO" and cue for checking inst. Room fans outside of control room.	NRC Validation Comment: Provide proper feedback to candidate.

Admin JPM N02-6 Changes

Change	Reason
Added "Note:" to last item on pages 7, 8, and 9.	NRC Validation Comment: This is explanatory information about what elements may impact calculation.

Admin JPM N02-7a Changes

Change	Reason
Added attachments of Caution Cards and NI data (previously page 2 of briefing handout)	Information required for simulator setup but not evaluation removed from JPM proper.
Added "PPC Inoperable and direction for manual calculation to brief"	NRC Validation Comment: Clarify required task.
Changed paperwork to entire procedure vs. selected pages.	NRC Validation Comment: Allow SRO candidates to determine required forms/steps.
Changed accuracy on page 3 for overall calculation to +/-.01 from +/- .001	Using high and low allowed values from readings requires greater range in final calculation.
Changed setup to include IC number and SML that was missing. Updated NI readings and QPTR based on new IC.	Established stable IC with setup performed to help ease of setup.

Admin JPM N02-7b Changes

Change	Reason
Added handouts of blank form and completed form for previous condition as candidate must sign it off. Also added evaluator note on page 5 to explain sign off on original paperwork vs. new paperwork.	NRC Validation Comment: Provide realistic paperwork.
Added "Refuel tag hung" cue.	NRC Validation Comment: Provide realistic feedback

Admin JPM N02-8 Changes

Change	Reason
Corrected clearance number on briefing.	NRC Validation Comment: Correct typos.
Added "Refuel tag hung" cue.	NRC Validation Comment: Provide realistic feedback
Added Note that 201 switches are on HSD panel.	Clarifying information.

Admin JPM N02-9 Changes

Change	Reason
None Required	

Admin JPM N02-10 Changes

Change	Reason
None Required	

JPM N02-01 Changes

Change	Reason
Added "All procedure prerequisites, precautions, and limitations have been met" to task briefing.	NRC Validation Comment: Moved to briefing from body of JPM.
Added "Another operator will monitor power and temperature"	NRC Validation Comment: Clarifying information so candidate may focus on assigned task.

JPM N02-02 Changes

Change	Reason
Added "All procedure prerequisites, precautions, and limitations have been met" to task briefing.	NRC Validation Comment: Moved to briefing from body of JPM.
Added ALTERNATE PATH to title page.	NRC Validation Comment: Request to clearly identify Alternate Path JPM.
Added actions (and required procedure handout) to drain Accumulator if filled to point of exceeding pressure limits. Also adjusted Simulator setup to allow wider band for fill. It was previously not possible to clear both the level and pressure alarms.	NRC Validation Comment: Request to provide option for candidate if they filled to the point of the high pressure alarm. Changes provide a clear success path for candidates.

JPM N02-03 Changes

Change	Reason
None Required	

DC Cook 2002 NRC ILT Examination

JPM N02-04 Changes

Change	Reason
Changed expected time to 25 minutes from 15 minutes.	NRC Validation Comments: Walkthrough with operator took longer than expected.
Changed setup to use leaky PORV vs. Failed open PORV. Also changed values of PRT conditions to match IC and turned off RCDT alarm.	Provide more realistic indications.
Added DCR-205 closed to setup.	NRC Validation Comments: Previous IC had DCR-205 open.
Added CUE for precaution & limitation on O2 concentrations	NRC Validation Comment: Provide realistic cues..
Added Evaluator Note & CUE to have operator complete the task (Temp is <120) once demonstrating the proper method to control temperature.	NRC Validation Comment: The process of cooling the PRT with feed and bleed is slow and would require several repetitive cycles.

JPM N02-05 Changes

Change	Reason
Added ALTERNATE PATH to title page.	NRC Validation Comment: Request to clearly identify Alternate Path JPM.
Changed Trigger file in setup	Ensure malfunction inserts when required.
Changed supplied paperwork to show previous completion of procedure.	NRC Validation Comments: Provide candidate realistic paperwork.
Provide a Cue that MTI is Not available when load cycling is observed.	NRC Validation Comments: Previous plant experience has had MTI make adjustments to correct problem.

JPM N02-06 Changes

Change	Reason
Added ALTERNATE PATH to title page.	NRC Validation Comment: Request to clearly identify Alternate Path JPM.
Changed time when Fire Alarm is inserted.	NRC Validation Comments: Ensure operator completes desired steps independent of performance speed..
Changed Cues from Booth Operator to Just AEO reports.	NRC Validation Comments: Eliminate unnecessary interaction with Page/radio and booth operator.

JPM N02-07 Changes

Change	Reason
Added Referenced Procedure to handout section.	NRC Validation Comment: Ensure copies of required procedure available.
Changed page 1 of JPM body to include ES-1.2 rev. 7.	Updated to latest revision of plant procedure – one page only impacted in this JPM – deleted specific step reference.

JPM N02-08 Changes

Change	Reason
Added ALTERNATE PATH to title page.	NRC Validation Comment: Request to clearly identify Alternate Path JPM.
Removed setup information that had all Accumulators injected.	This was not deleted from a previous template and is not required in this JPM.
Changed Cues from Booth Operator to Just AEO reports.	NRC Validation Comments: Eliminate unnecessary interaction with Page/radio and booth operator.
Changed pages 1 and 2 of JPM body to include ES-1.2 rev. 7.	Updated to latest revision of plant procedure – RNO changed for RCS pressure to isolate accumulator vs. temperature.

JPM N02-09 Changes

Change	Reason
None Required	

JPM N02-10 Changes

Change	Reason
Moved Notes on first page to general cues area..	NRC Validation Comment: Ease of use.
Added specific valves and locally observable indications (Pin or stem positions) for each valve.	NRC Validation Comment: Add realism to cues.
Added Step 4.7.4 to page 9 and associated cue.	NRC Validation Comment: Step was previously cut off and cue left out.
Deleted "Instructor" from Cue on page 10.	NRC Validation Comment: Examiner will provide cue.
Corrected handout package.	NRC Validation Comment: Initial data should be completed by operator.

JPM N02-11 Changes

Change	Reason
Added ALTERNATE PATH to title page.	NRC Validation Comment: Request to clearly identify Alternate Path JPM.
Added CUE that thermal overload was not tripped.	NRC Validation Comment: Cue provides clarifying information.
Added word "Cue" on feedback on page 2 and added cues for breakers	NRC Validation Comments: Clarify and provide feedback to Candidate on actions taken.

JPM N02-12 Changes

Change	Reason
Added "All procedure prerequisites, precautions, and limitations have been met" to task briefing.	NRC Validation Comment: Moved to briefing from body of JPM.
Clarified Cue for ESW temperature.	NRC Validation Comment: Ease of use.

JPM N02-13 Changes

Change	Reason
Added ALTERNATE PATH to title page.	NRC Validation Comment: Request to clearly identify Alternate Path JPM.
Added Picture of inside of breaker cubicle to actions and handouts.	NRC Validation Comment: Request to have candidate open breaker to locate the fuses. Plant will not allow breaker opened since it is safety significant and has auto close functions.
Added Cues for lights and targets on breakers.	NRC Validation Comment: Add realism to cues.
Corrected typo in briefing and page 2 breaker number.	Clarify material.

JPM N02-14 Changes

Change	Reason
Added ALTERNATE PATH to title page.	NRC Validation Comment: Request to clearly identify Alternate Path JPM.
Added Evaluator notes on equipment box locations. (Note that there are various boxes located around the plant so the only specific one listed was that by the AFW pump)	NRC Validation Comment: Request to have candidate locate required equipment and provide evaluator with location.
Added Evaluator note on location of breaker in Aux Building.	NRC Validation Comment: Eliminate multiple entries into RCA.
Corrected sub panel number typo on page 4.	Clarify material.

JPM N02-15 Changes

Change	Reason
Removed CT (critical task) from locating valves and hose.	NRC Validation Comment: Valves and hose are manipulated later as critical steps.
Added "quick disconnects" to hose steps	NRC Validation Comment: Clarifying information.

Cook02-01 Changes from Submittal

Change	Reason
Changed Initial Condition values and IC Number	IC stabilized and re-snapped.
Removed Events 1 Swap Hotwell pumps (moved to Cook02-02) and 2 Hotwell pump trip. Removed Event 1 from turnover ,events 1 & 2 from summary page, and detailed actions.	NRC Validation comment: Normal event not required in spare scenario. Hotwell pump trip event required normal evolution.
Corrected event numbers and page numbers throughout.	Formatting
Clarified Simulator Setup information, added SSPS Door Indications and rack-in-test indications to simulator operator section. Also added feedback information for RP and Chemistry requests.	Provide cues/actions to enhance usability and realism from simulator operator

Cook02-02 Changes from Submittal

Change	Reason
Changed Initial Condition values and IC Number	IC stabilized and re-snapped.
Changed reason for DG OOS to Oil Change.	Limit required setup.
Added Event 1 Swap Hotwell pumps (moved from Cook02-02) as Normal Event. Added Event 1 to turnover, summary page, and detailed actions.	NRC Validation comment: Normal event required in scenario. Turbine Power Changes performed by RO not allowed as Normal Event.
Added TS 3.3.3.5 Remote Shutdown Instrumentation to Event 3.	NRC Validation Comment: TS applies to selected channel.
Corrected event numbers and page numbers throughout.	Formatting
Clarified Simulator Setup information, added SSPS Door Indications and rack-in-test indications to simulator operator section. Added Response for cabinet doors and Train N Battery.	Provide cues/actions to enhance usability and realism from simulator operator
Added new RF to trip interposing relay for QLC-451 failure.	Plant changes included into simulator.

Cook02-03 Changes from Submittal

Change	Reason
Changed Initial Condition values and IC Number	IC stabilized and re-snapped.
Changed reason for AFW OOS to Oil Change.	Limit required setup.
Added Event 1 Place MFP on-line as Normal Event. Added Event 1 to turnover, summary page, and detailed actions.	NRC Validation comment: Normal event required in scenario. Turbine Power Changes performed by RO not allowed as Normal Event.
Moved Power Increase to Event 4 after Hot Leg RTD failure. Moved Event 4 on summary page and detailed actions.	NRC Validation comment: RTD failure may be enough of a Reactivity Change (rods in Auto) and so Power ramp may not be required.
Corrected Severity of Event 5	Instructor Station setup.
Changed Event 6 summary , detailed actions, and simulator operator instructions to place Event 7 in after Letdown has been restored.	NRC Validation Comment: Request to see letdown restoration as part of Charging pump trip event.
Added Note to detailed actions to event 2 that 1 CCW pump re-start may be attempted per ARP.	NRC Validation Comment: Clarifying information for evaluators.
Added Continuous Control Bank Movement procedure actions to detailed actions from Event 3.	NRC Validation Comment: Rods may now be in Auto since the Power Change Event has been moved.
Corrected event numbers and page numbers throughout.	Formatting
Added prompt as Shift Manager to have crew restore Power/temperature after RTD failure to Simulator Operator Section.	NRC Validation Comment: Request to Prompt crew to restore power after RTD Failure may avoid Power Change.
Clarified Simulator Setup information, added SSPS Door Indications and rack-in-test indications to simulator operator section	Provide cues/actions to enhance usability and realism from simulator operator

Cook02-04 Changes from Submittal

Change	Reason
Changed Initial Condition values and IC Number	IC stabilized and re-snapped.
Changed reason for AFW Pump OOS to Breaker repairs.	Limit required setup.
Added Event 1 Place Main FW Pumps on Main Steam as Normal Event. Added Event 1 to turnover, summary page, and detailed actions.	NRC Validation comment: Normal event required in scenario. Turbine Power Changes performed by RO not allowed as Normal Event.
Changed Event 6 from Loss of 600V MCC to Control Room Air Handling Unit Failure. Also moved to Event 5 to ensure it is addressed by BOP. Added Event 5 to turnover, summary page, and detailed actions.	NRC Validation Comments: Loss of 600V MCC contained several high priority TS items so the intended action of addressing Containment Ventilation was given a low priority resulting in limited actions for the BOP.
Added TS 3.4.4 Pressurizer due to a loss of 1 train of pressurizer heaters to Event 4.	NRC Validation Comment: TS applies to selected failure
Added Check 2-MRV-220, SG Stop Valve closed to Event 9 and Critical Task #3 list that Checks SG isolated.	NRC Validation Comment: Steam Lines auto Isolate but valve should be listed in the check section.
Corrected event numbers and page numbers throughout.	Formatting
Clarified Simulator Setup information, added SSPS Door Indications and rack-in-test indications to simulator operator section.	Provide cues/actions to enhance usability and realism from simulator operator

Cook02-05 Changes from Submittal

Change	Reason
Changed Initial Condition values and IC Number	IC stabilized and re-snapped.
Added Event 1 Swap NESW Pumps as Normal Event. Added Event 1 to turnover, summary page, and detailed actions.	NRC Validation comment: Normal event required in scenario. Turbine Power Changes performed by RO not allowed as Normal Event.
Added "May elect to have U-1 start the 1W ESW pump" to Event 3.	NRC Validation Comment: Clarifying information. Action is not required but is optional per ARP.
Added "May enter Technical Specification 3.2.5 DNB and Tave Operating Parameters if Pressure lowers to <2200 psig." To Events 5 and 6.	NRC Validation Comment: Clarifying information. Tech Specs entry may be required depending on response time of crew.
Added Note to detailed actions to Event 9 that 1 RHR pump re-start may be attempted per ARP.	NRC Validation Comment: Clarifying information for evaluators.
Corrected event numbers and page numbers throughout.	Formatting
Clarified Simulator Setup information, added SSPS Door Indications and rack-in-test indications to simulator operator section. Added Clarifying information on ESW strainer response.	Provide cues/actions to enhance usability and realism from simulator operator

Cook02-06 Changes from Submittal

Change	Reason
Changed Initial Condition values and IC Number	IC stabilized and re-snapped.
Added Event 1 Synchronize 2AB EDG to T21B, Unload, and Shutdown as Normal Event. Added Event 1 to turnover, summary page, and detailed actions.	NRC Validation comment: Normal event required in scenario. Turbine Power Changes performed by RO not allowed as Normal Event.
Fixed Title of Event 5 to Main Steam Turbine Bypass Header Pressure UPC-101 Fails Low (Steam Input to FWP Delta-P) throughout summary and detailed actions.	NRC Validation Comment: Clarifying information.
Added cyclic loading attempts to summary and "or place T21D8 in PTL" to detailed actions for Event 9.	NRC Validation Comment: Clarifying information.
Corrected event numbers and page numbers throughout.	Formatting
Clarified Simulator Setup information, added SSPS Door Indications and rack-in-test indications to simulator operator section. Added Clarifying information on EDG Normal Shutdown Local Actions.	Provide cues/actions to enhance usability and realism from simulator operator

DC Cook 2002 NRC ILT Examination

Written Examination Changes

001	Mark as SRO/RO level on SRO exam – previously SRO Only
002	Typo – "reposition" in distracters B & D
004	Reword – Change from "following" to After
008	Change "PZR" to "PRZ" in distracters A & D
009	Move common phrase "The discharge rate will …" from distracters and place in the stem. Changed from "discharge rate" to "current draw (amps)" to clarify question. Changed "increase" and "decrease" to "rise" and "lower" respectively
017	Typo – "An" vs. "A" in first bullet in the stem.
020	Removed the phrase "and stable" from ninth bullet
022	Remove extra "the" from distracter D
026	Change "are" to "is" in fourth bulleted step.
029	Typo – "controller" in third bullet of stem
033	Typo – "setpoint" in distracter B and separate leakrate to leak rate in distracter D
034	Changed Question to actions required if PORV open (how to operate) based on previous question not matching K/A
039	Typo – "conditions" in stem
041	Mark as SRO/RO level on SRO exam – previously SRO Only
048	Add "?" to end of stem
049	Changed Question to provide indications and ask required actions/ reasons since previous question did not cover BOTH parts of K/A
050	Typo – "continuously" in fourth bullet of stem. Modified stem and all distracters to add action required based on listed conditions since previous question did not cover BOTH parts of K/A
051	Changed to "Operators performed a" from "A feedwater pump trip causes the plant" since the plant does not have an automatic runback on FWP trip.
062	Typo – "arrangement" in stem
063	Typo – "Containment" in fourth bullet of stem
064	Typo – "describes" in last statement in stem
074	Typo – "stabilized" in fourth bullet and "successfully" in fifth bullet of stem
075	Typo – "Effluent" in reference title
082	Change tense to "equalize" in fourth bullet of stem
088	Typo – "of" in last line of stem
091	Typo – "control" in first line of stem
101	Typo – "exchanger" in second bullet of stem
102	Typo – "Instrumentation" in reference title
123	Typo – "initiate" in distracter D
126	Remove "?" from second sentence in stem and typo – "suppression" in distracter C

DC Cook 2002 Written Exam
Outline to RO/SRO
Question Matrix

9/23/2002

Exam Outline Number	KA Number	RO Exam Number	SRO Exam Number	Exam level
001	000001 - AA2.03		1	SRO
002	000005 - AK2.02	1	2	BOTH
003	000015 - AA2.02		3	SRO
004	000024 - AK1.01	2	4	BOTH
005	000026 - AA1.07	3	5	BOTH
006	000029 - EA1.13	4	6	BOTH
007	000029 - EK3.10	5	7	BOTH
008	000040 - 2.4.18		8	SRO
009	000055 - EA2.05	6		RO
010	000055 - EK1.02	7	9	BOTH
011	000059 - AK3.01	8	10	BOTH
012	000062 - 2.4.24	9	11	BOTH
013	000067 - AA1.09	10	12	BOTH
014	000067 - AA2.07		13	SRO
015	000069 - AK1.01	11	14	BOTH
016	000069 - AK2.03	12	15	BOTH
017	000074 - 2.4.29		16	SRO
018	000074 - EA2.05		17	SRO
019	00WE02 - EA1.1	13	18	BOTH
020	00WE02 - EK2.2	14	19	BOTH
021	00WE06 - EK1.1	15	20	BOTH
022	00WE09 - EA1.3	16		RO
023	00WE09 - EK3.2	17	21	BOTH
024	00WE10 - EK2.2	18	22	BOTH
025	00WE14 - 2.4.4		23	SRO
026	00WE14 - EK3.1	19	24	BOTH
027	000007 - 2.4.48		25	SRO
028	000007 - EA1.09	20	26	BOTH
029	000027 - AK2.03	21	27	BOTH
030	000027 - AK3.01	22	28	BOTH
031	000032 - AK2.01	23	29	BOTH
032	000037 - AK1.02	24	30	BOTH
033	000037 - AK3.02	25	31	BOTH
034	000038 - EA1.16	26	32	BOTH
035	000038 - EK1.03	27	33	BOTH
036	000054 - AA1.02	28	34	BOTH
037	000060 - 2.3.10	29		RO
038	000060 - AK1.04	30	35	BOTH
039	000061 - AA2.03		36	SRO
040	000065 - 2.1.7		37	SRO
041	000065 - AA2.03		38	SRO
042	00WE11 - EA2.2	31	39	BOTH
043	00WE16 - EA2.2	32		RO
044	00WE16 - EK2.1	33	40	BOTH
045	000028 - 2.2.22		41	SRO
046	000056 - AA1.37	34		RO
047	000056 - AK1.03	35	42	BOTH
048	00WE15 - EA2.2		43	SRO
049	00WE15 - EK2.2	36		RO
050	001000 - A2.19	37	44	BOTH
051	001000 - A4.05	38		RO
052	003000 - K2.02	39	45	BOTH
053	003000 - K3.04	40	46	BOTH
054	004000 - A1.04	41	47	BOTH
055	004000 - K6.13	42		RO
056	013000 - A2.04	43	48	BOTH
057	013000 - K2.01	44	49	BOTH
058	014000 - A4.01	45	50	BOTH
059	015000 - 2.1.18	46		RO
060	015000 - A4.03	47	51	BOTH
061	017000 - A4.01	48		RO
062	017000 - K4.02	49	52	BOTH
063	022000 - 2.1.31	50		RO
064	025000 - A3.01	51		RO
065	025000 - K4.02	52	53	BOTH
066	026000 - A1.05	53	54	BOTH
067	026000 - A3.01	54	55	BOTH
068	056000 - K1.03	55	56	BOTH
069	059000 - A1.03	56		RO
070	059000 - A3.03	57	57	BOTH
071	061000 - 2.2.22	58	58	BOTH
072	061000 - K1.01	59		RO
073	016000 - K5.01	60	59	BOTH
074	063000 - K1.02		60	SRO
075	068000 - K6.10	61	61	BOTH
076	071000 - 2.4.46	62		RO
077	072000 - K3.02	63	62	BOTH
078	006000 - K3.01	64	63	BOTH
079	006000 - K5.05	65	64	BOTH
080	010000 - A2.02	66	65	BOTH
081	011000 - K2.02	67	66	BOTH
082	011000 - K6.05	68	67	BOTH
083	016000 - A2.01	69		RO
084	016000 - K5.01	70	68	BOTH
085	028000 - A2.03	71	69	BOTH
086	029000 - 2.1.33	72		RO
087	029000 - 2.2.29		70	SRO
088	033000 - A3.01	73	71	BOTH
089	035000 - A4.06	74	72	BOTH
090	035000 - K4.01	75	73	BOTH
091	039000 - A1.03	76	74	BOTH
092	039000 - K3.04	77	75	BOTH
093	062000 - K2.01	78		RO
094	062000 - K4.03	79		RO
095	064000 - K1.02	80	76	BOTH
096	064000 - K6.07	81	77	BOTH
097	079000 - 2.4.34		78	SRO
098	103000 - A4.04	82	79	BOTH
099	007000 - A1.01	83	80	BOTH
100	007000 - A2.03	84		RO
101	008000 - A3.01	85		RO
102	045000 - 2.2.24		81	SRO
103	045000 - K1.06	86	82	BOTH
104	078000 K.301	87		RO
105	078000-K4.02	88	83	BOTH
106	194001 - 2.1.10		84	SRO
107	194001 - 2.1.16	89		RO
108	194001 - 2.1.23	90	85	BOTH
109	194001 - 2.1.3	91		RO
110	194001 - 2.1.34		86	SRO
111	194001 - 2.1.7		87	SRO
112	194001 - 2.2.12	92	88	BOTH
113	194001 - 2.2.19		89	SRO
114	194001 - 2.2.26	93		RO
115	194001 - 2.2.3	94	90	BOTH
116	194001 - 2.2.6		91	SRO
117	194001 - 2.3.1		92	SRO
118	194001 - 2.3.11	95		RO
119	194001 - 2.3.2	96	93	BOTH
120	194001 - 2.3.4		94	SRO
121	194001 - 2.3.8		95	SRO
122	194001 - 2.3.9	97	96	BOTH
123	194001 - 2.4.1		97	SRO
124	194001 - 2.4.10	98	98	BOTH
125	194001 - 2.4.19	99		RO
126	194001 - 2.4.26		99	SRO
127	194001 - 2.4.49		100	SRO
128	194001 - 2.4.9	100		RO