

Administrative Documents

CRYSTAL RIVER AUGUST EXAM 50-302/2003-301

AUGUST 25 - 29, 2003

- ✓1. Exam Preparation Checklist ES-201-1
- ✓2. Exam Outline Quality Checklist ES-201-2
- ✓3. Exam Security Agreement ES-201-3
- ✓4. Administrative Topics Outline (Final) ES-301-1
- ✓5. Control Room Systems and Facility Walk-through Test Outline
(Final) ES-301-2
- ✓6. Operating Test Quality Check Sheet ES-301-3
- ✓7. Simulator Scenario Quality Check Sheet ES-301-4
- ✓8. Transient and Event Checklist ES-301-5
- ✓9. Competencies Checklist ES-301-6
- ✓10. Written Exam Quality Check Sheet ES-401-7b
- ✓11. Written Exam Review Worksheet ES-401-9
- ✓12. Written Exam Grading Quality Checklist ES-403-1
- ✓13. Post-Exam Check Sheet ES-501-1

Facility: Crystal River Unit #3		Date of Examination: 8-25-03		Operating Test Number: 1	
1. GENERAL CRITERIA			Initials		
			a	b*	c#
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	AK	AK	AK	AK
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	AK	AK	AK	AK
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	AK	AK	AK	AK
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	AK	AK	AK	AK
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	AK	AK	AK	AK
2. WALK-THROUGH CRITERIA			--	--	--
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> initial conditions initiating cues references and tools, including associated procedures reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee specific performance criteria that include: <ul style="list-style-type: none"> detailed expected actions with exact criteria and nomenclature system response and other examiner cues statements describing important observations to be made by the applicant criteria for successful completion of the task identification of critical steps and their associated performance standards restrictions on the sequence of steps, if applicable 	AK	AK	AK	AK
b.	Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.	AK	AK	AK	AK
c.	At least 20 percent of the JPMs on each test are new or significantly modified.	AK	AK	AK	AK
3. SIMULATOR CRITERIA			--	--	--
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	AK	AK	AK	AK
Printed Name / Signature		Date			
a. Author	Alan Kennedy / <i>Alan Kennedy</i>	7-22-03			
b. Facility Reviewer(*)	Mark VanSicklen / <i>Mark VanSicklen</i>	7-22-03			
c. NRC Chief Examiner (#)	Kathleen O'Donohue / <i>Kathleen O'Donohue</i>	7/30/03			
d. NRC Supervisor	MICHAEL E. ERNSTES / <i>Michael E. Ernstes</i>	8/14/03			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.					

Facility: Crystal River Unit #3 Date of Exam: 8-25-03 Scenario Numbers: 1 / 2 / 3 / 4 Operating Test No.: 1									
QUALITATIVE ATTRIBUTES				Initials					
				a	b*	c#			
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.			AK	MB	P			
2.	The scenarios consist mostly of related events.			AK	MB	P			
3.	Each event description consists of . the point in the scenario when it is to be initiated . the malfunction(s) that are entered to initiate the event . the symptoms/cues that will be visible to the crew . the expected operator actions (by shift position) . the event termination point (if applicable)			AK	MB	P			
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.			AK	MB	P			
5.	The events are valid with regard to physics and thermodynamics.			AK	MB	P			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			AK	MB	P			
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.			AK	MB	P			
8.	The simulator modeling is not altered.			AK	MB	P			
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.			AK	MB	P			
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.			AK	MB	P			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			AK	MB	P			
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).			AK	MB	P			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.			AK	MB	P			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d)				Actual Attributes					
				1	2	3			
1.	Total malfunctions (5-8)			8	10	8	AK	MB	P
2.	Malfunctions after EOP entry (1-2)			2	3	2	AK	MB	P
3.	Abnormal events (2-4)			3	2	4	AK	MB	P
4.	Major transients (1-2)			1	1	1	AK	MB	P
5.	EOPs entered/requiring substantive actions (1-2)			2	2	1	AK	MB	P
6.	EOP contingencies requiring substantive actions (0-2)			2	1	2	AK	MB	P
7.	Critical tasks (2-3)			2	2	2	AK	MB	P

OPERATING TEST NO.: 1

Applicant Type	Evolution Type	Minimum Number	Scenario Number							
			1		2		3		4	
			RO	BOP	RO	BOP	RO	BOP	RO	BOP
RO	Reactivity	1*	5		6		6			
	Normal	1*		1		1	1			
	Instrument / Component	4*	3/4 /10	6/7/ 9	3/6 /8/ 9	4/5/ 7	3/4 /8	5/9		
	Major	1	8	8	8	8	7	7		
As RO	Reactivity	1*	5		6		6			
	Normal	0					1			
	Instrument / Component	2*	3/4/ 10		3/6/ 8/9		3/4/ 8			
	Major	1	8		8		7			
SRO-I	Reactivity	0	5		6		6			
	Normal	1*	1		1		1			
	Instrument / Component	2*	2/3/4/6/7/9/ 10		2/3/4/5/7/9		2/3/4/5/8/9			
	Major	1	8		8		7			
As SRO	Reactivity	0	5		6		6			
	Normal	1*	1		1		1			
	Instrument / Component	2*	2/3/4/6/7/9/ 10		2/3/4/5/7/9		2/3/4/5/8/9			
	Major	1	8		8		7			
SRO-U	Reactivity	0	5		6		6			
	Normal	1*	1		1		1			
	Instrument / Component	2*	2/3/4/6/7/9/ 10		2/3/4/5/7/9		2/3/4/5/8/9			
	Major	1	8		8		7			

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. * Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a one-for-one basis.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Alan Kennedy

NRC Reviewer:



Competencies	SRO				RO				BOP			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Interpret / Diagnose Events and Conditions	3/4/6	3/6	4		3/4/5/6	3/6	4	8	5	3/4/7/8	4/5	9/10
Comply With and Use Procedures (1)	5/6/8	4/6/8	7		5/6/8	3/4/8	7	5/6/8	1/6/8	4/7/8	4/5/7	1/3/10
Operate Control Boards (2)	3/4/5	5/8	3/4/6		3/4/5	3/7	3/4/6	3/5/6/8	6/9/10	4/5/8/9	5/8/9	1/2
Communicate and Interact	3/4/6/8	5/6/8	3/5/7		3/4/6/8	3/6/7/8	3/5/7	7/8	3/6/8	4/5/8	5/7	4/7/8
Demonstrate Supervisory Ability (3)	5/6/8	3/6/8	5/7									
Comply With and Use Tech. Specs. (3)	2/3	2	2									
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author: Alan Kennedy

NRC Reviewer: Kathleen Quinn

Facility: Crystal River Unit #3		Date of Exam: 8-22-03		Exam Level: RO/SRO		
Item Description				Initial		
				a	b*	c#
1.	Questions and answers technically accurate and applicable to facility	AK	MEH	(P)		
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	AK	MEH	(P)		
3.	SRO questions are appropriate per Section D.2.d of ES-401	AK	MEH	(P)		
4.	Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process					(P)
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input checked="" type="checkbox"/> the audit exam was systematically and randomly developed; or <input checked="" type="checkbox"/> the audit exam was completed before the license exam was started; or <input type="checkbox"/> the examinations were developed independently; or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)	AK	MEH	(P)		
6.	Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual RO / SRO-only question distribution(s) at right	Bank	Modified	New	AK	MEH (P)
		43 / 14 18	0 / 4 2	32 / 7		
7.	Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right	Memory	C/A		AK	MEH (P)
		34 / 9 28 / 8 2 (P)	41 / 16 12 / 27 2 (P)			
8.	References/handouts provided do not give away answers	AK	MEH	(P)		
9.	Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the Tier to which they are assigned; deviations are justified	AK	MEH	(P)		
10.	Question psychometric quality and format meet ES, Appendix B, guidelines	AK	MEH	(P)		
11.	The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet	AK	MEH	(P)		
Printed Name / Signature					Date	
a. Author	Alan Kennedy / <i>Alan Kennedy</i>				7/22/03	
b. Facility Reviewer (*)	Mark VanSicklen / <i>Mark VanSicklen</i>				7/22/03	
c. NRC Chief Examiner (#)	Kathleen O'Donohue / <i>Kathleen O'Donohue</i>				7/30/03	
d. NRC Regional Supervisor	MICHAEL E. ERNSTES / <i>Michael E. Ernstes</i>				8/14/03	
Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.						

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	
1	H	2										X	E	007EA2.02 - partially missed K/A replaced with ques. Sat
2	F	2											S	008AK1.01 - no comment
3	F	3											S	009EK2.03 - memory not C/A
4	F	2											S	011EG2.4.20, no comment
5	H	3											S	003K1.03 -no comment
6	H	3										X	E	022AA2.04 - partially missed K/A, corrected the ques. - SAT
7	F	2		Yes									E	025AK2.05 - rephrase to delete word "excessive" - cueing
8	F	2	X										E	026AA1.04 - give time instead of "auto completed could be C/A Difficulty 3
9	F	2											E	027AA1.05, rephrase "should" to is directed or management expectation unless should is part of constrained language
10	H	2											S	029EK3.11 - no comment
11	F	2										X	E	038EA2.08- partially missed K/A, Revised Quest - SAT
12	H	3											U S	BWE05EA1.02 - delete the words most probably otherwise could argue more than one right answer Rewrote question - SAT
13	F	2											E	054AA1.02 - A & B distractors seem tricky not knowledge based
14	F	2											S	055EK3.02 - no comment
15	H	2											S	056AG2.1.02 - no comment

Written Examination
Review Worksheet RO Questions

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	#/ units	Back- ward		
16	F	2 3						Yes				U S	058AA2.02 - teaching and cueing answer delete middle sentence in stem When corrected could be F difficulty 3, Rewrite - SAT
17	F	3										E	062AK3.02 - A distractor seems to be tricky not knowledge based
18	F	2										S	BWE04EK1.03 - reference is direct lookup - not allowed
19	F	2										S	003AK3.07, no comment
20	F	2		YES		NO						E	028AK2.02, cuing, get rid of italicized word, rephrase distractor c so plausible - Rephrased distractor - SAT
21	H	2										S	033AA2.04, no comment
22	F	2	X									E	037AK3.05 - rephrased stem for readability
23	F	2										S	069AG2.1.33 - direct look up if provide TS, reference not allowed
24	H	2										S	BWA01AA2.2 - no comment
25	H	2				X						E	BWA04AA1.01 - Are the A and C distractors really wrong?
26	H	2										S	BWA07AK1.2 - direct lookup - reference not allowed After discussion with licensee - references allowed SAT
27	H	2										S	BWE13EK2.01 - no comment
28	H	3										S	003K3.05 - No comment
29	F	2										S	003K6.04, no comment
30	H	2										E	004A1.12 - change greater than calculated to 80 gpm revised - SAT
31	F	2				NO						U S	005K4.08, distractors c and d not adequate rephrased distractors - SAT
32	F	3										S	006K4.05 no comment

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
33	F	1											U	006G2.1.28, too generic, no operational significance, suppose to be purpose etc of components or controls not generic ecoss basis New question submitted - SAT	
34	H	3											E	007A4.10, Is RCDT equivalent to the PRT for CR3??	
35	F	2											E	008A4.07, seems basic knowledge	
36	H	2											S	010K5.01, Another steam table question	
37	H	2											S	012K1.03,no comment	
38	F	2											S	013K6.01- is memory not C/A	
39	F	3											S	013K1.13, no comment	
40	F	2											S	022A2.04, no comment	
41	F	2							X				E	026A3.01 - could be H if put in time line and delete statement about auto function completion	
42	F	2		YES									E	039K3.04 - teaching, use Valve title only, corrected SAT	
43	H	3										NO	U	039A2.05 - missed part B of K/A, revised - SAT	
44	F	2											S	056K1.03 - no comment	
45	F	2											S	059A4.10 - is F not H	
46	F	2											S	059G2.1.22 - no comment	
47	F	2											S	061K2.01 - F not H	
48	H	2											S	062K3.01 no comment	

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		
49	F	2											S	062G2.1.33 - direct look up if provide the TS reference not allowed
50	F	2											S	063A3.01 - no comment
51	H	3		X									E	064A2.08, removed information that the EDG picks up reactive load, that is teaching
52	H	4							no				U	073K5.02 - does not apply operationally to the RO responsibilities; GFES level no discriminatory value;
52	F	2											S	029K4.03 - randomly selected to replace 073K5.02 No Comment
53	H	2											S	076A2.02 - no comment
54	F	2											S	078K2.01, no comment
55	F	3											S	103A3.01, listed as C/A - is Mem
56	H	2											U	001K5.28, C&D distractor implausible
57	H	2											S	002K1.09., no comment
58	F	2											S	014K4.05, no comment
59	H	2									X		E	015A1.04, Rephrase to better meet K/A - references direct look up not allowed
60	F	2											S	016A3.01, no comment
61	F	2											S	035K4.01, no comment
62	H	2											S	041A2.02 - no comment
63	H	2									X		E	045K3.01 - partially missed K/A, revised ques
64	F	2											S	071K3.04 - no comment

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		
65	F	2											S	086A4.06, no comment
66	H	3											S	G2.1.7 - no comment
67	F	2											S	G2.1.20 - no reference direct look up - add per EOP -3
68	F	2											S	G2.1.24 - no comment
69	F	2											S	G2.2.02 - no comment
70	F	2											S	G2.2.12 - no reference - direct lookup
71	F	2									NO		E	G2.3.1 - missed 2 nd half of K/A replaced question - SAT
72	C/A	3											S	G2.3.4 - no comment
73	F	2											S	G2.4.1 - no comment
74	F	2											S	G2.4.11 - no comment
75	F	2											S	G2.4.35 - no comment

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	
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 then 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 <u>SRO-only</u> (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	
76	H	2											S	009EK3.06 - no comment
77	H	2	X										E	025AK1.01 - reference direct look up not allowed, rephrased stem for readability - Replaced question because references not allowed New question sat
78	H	3											S	026AG2.4.47 - no comment
79	F	3											E	029EA2.09 - partially missed K/A - ATWAS not AMSAC- REVISED - SAT
80	H	2											S	038EA2.13 - no reference allowed - direct lookup Resubmitted new question - unset, testing math-skill not K/A
80	F	3											S	057AK3.01 - randomly selected new K/A to replace 038EA2.13, no comment
81	F	2	X										E	040AK3.2 stem difficult to understand, minor rephrasing - SAT
82	F	2											S	055G2.4.7 - no comment
83	H	3											S	003AA2.03 - no comment
84	F	2		X									E	061AG2.1.14 - delete italics - acts as cueing italics deleted - SAT
85	H	2											S	074EA2.03, is there admin direction that makes the other distractors wrong
86	F	2				NO							U S	BWA02AA1.1 - need new dist. Several correct answers unless there is admin direction on what is preferred. Rephrased - SAT
87	F	2										NO	U S	BWA05G2.2.20 - missed k/a, Revised - SAT
88	H	3											E	004A2.09 - references not allowed direct lookup, minor rephrase - Replaced Question due to references not allowed. New question - sat

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		
89	F	2												S	012G2.2.24 - reference direct lookup - not allowed
90	H	2												E	061A2.05 - minor rephrasing of stem to better meet K/A revised- SAT
91	H	3												S	064A1.03 - no comment
92	F	2												S	011G2.4.46, was listed as C/A - is memory
93	F	3												S	034G2.3.10 - reference direct lookup - not allowed
94	F	2												S	G2.1.04 can not allow reference - direct lookup
95	F	3												S	G2.1.12 - memory not C/A - reference direct look up - not allowed
96	H	2												S	G2.2.22 - can not allow all reference direct lookup - may allow graph
97	H	2												E	G2.2.27 - can not allow reference, direct lookup, minor rephrasing of distractor B - revised - SAT
98	F	2												E	G2.3.6, listed as C/A. Is memory - minor rephrasing of distractor D- references direct lookup - not allowed - revised - SAT
99	F	2												S	G2.4.06 - no comment
100	H	2												S	G2.4.41 - no comment

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			
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 then 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).											

Facility: Crystal River #3		Date of Exam: 8-29-03		Exam Level: RO/SRO	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	AK	MEZ	R		
2. Answer key changes and question deletions justified and documented	N/A	N/A	R/A		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	AK	MEZ	R		
4. Grading for all borderline cases (80 +/- 2% overall and 70 +/- 4% on the SRO-only) reviewed in detail	N/A	N/A	M/A		
5. All other failing examinations checked to ensure that grades are justified	N/A	N/A	M/A		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	AK	MEZ	R		
Printed Name / Signature		Date			
a. Grader	ALAN KENNEDY / Alan Kennedy	9-2-03			
b. Facility Reviewer(*)	MARK VAN SICKLEN / Mark Van Sicklen	9-2-03			
c. NRC Chief Examiner (*)	Kathleen / Kathleen	9/3/03			
d. NRC Supervisor (*)	MIKE ERNSTES / Mike Ernest	9/11/03			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

Task Description	Date Complete
1. Facility written exam comments or graded exams received and verified complete	9/03/03
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	N/A
3. Operating tests graded by NRC examiners	9/09/03
4. NRC Chief examiner review of written exam and operating test grading completed	9/09/03
5. Responsible supervisor review completed	9/09/03
6. Management (licensing official) review completed	9/10/03
7. License and denial letters mailed	9/11/03
8. Facility notified of results	9/11/03
9. Examination report issued (refer to NRC MC 0610 -0612)	10/03/03
10. Reference material returned after final resolution of any appeals	n/a

Facility: <u>Crystal River</u>		Date of Examination: <u>8/25 - 29/03</u>
Examinations Developed by: <u>Facility</u> / NRC (circle one)		
Target Date*	Task Description / Reference	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	K O'D
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	K O'D
-120	3. Facility contact briefed on security & other requirements (C.2.c)	K O'D
-120	4. Corporate notification letter sent (C.2.d)	K O'D
[-90]	[5. Reference material due (C.1.e; C.3.c)]	K O'D
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	K O'D
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	K O'D
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	K O'D
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	K O'D
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	K O'D
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	K O'D
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	K O'D
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	K O'D
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	K O'D
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	K O'D
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	K O'D
<p>* Target dates are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.</p> <p>[] Applies only to examinations prepared by the NRC.</p>		

Facility: Crystal River Unit #3		Date of Examination: August 22 nd and week of August 25 th , 2003		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	K	MEAS	CC
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled.	K	MEAS	CC
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	K	MEAS	CC
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	K	MEAS	CC
2. S I M	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, and major transients.	K	MEAS	CC
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; ensure each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s)*, and scenarios will not be repeated on subsequent days.	K	MEAS	CC
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	K	MEAS	CC
3. W / T	a. Verify that: (1) the outline(s) contain(s) the required number of control room and in-plant tasks, (2) no more than 30% of the test material is repeated from the last NRC examination, (3)* no tasks are duplicated from the applicants' audit test(s), and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks.	K	MEAS	CC
	b. Verify that: (1) the tasks are distributed among the safety function groupings as specified in ES-301, (2) one task is conducted in a low-power or shutdown condition, (3) 4 - 6 (2 - 3 for SRO-U) of the tasks require the applicant to implement an alternate path procedure, (4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and (5) the in-plant walk-through requires the applicant to enter the RCA.	K	MEAS	CC
	c. Verify that the required administrative topics are covered.	K	MEAS	CC
	d. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	K	MEAS	CC
	e. Verify that the required administrative topics are covered.	K	MEAS	CC
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	K	MEAS	CC
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	K	MEAS	CC
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	K	MEAS	CC
	d. Check for duplication and overlap among exam sections.	K	MEAS	CC
	e. Check the entire exam for balance of coverage.	K	MEAS	CC
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	K	MEAS	CC

a. Author	ALAN KENNEDY	Printed Name/Signature	Alan Kennedy	Date	3-14-03
b. Facility Reviewer (*)	MARK VAN SICKLE	Printed Name/Signature	Mark Van Sickle	Date	3-14-03
c. NRC Chief Examiner (#)	Kathleen O'Connell	Printed Name/Signature	Kathleen O'Connell	Date	3-24-03
d. NRC Supervisor	MIKE ERNSTES	Printed Name/Signature	Mike Ernestes	Date	3/24/03

Note: * Not applicable for NRC-developed examinations.
Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.

ES-201

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 8-25-03 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized person the contents of this security agreement until the completion of the examination. I understand that the licensee is not to be held responsible for any unauthorized disclosure of the contents of this security agreement.

From the date that I entered into this security agreement until the completion of the examination, I agree to provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below.

during the week(s) of 8-25-03.

instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
<i>[Signature]</i>		<i>[Signature]</i>	9/26/03	

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)
1. ALAN KENNEDY	Inspector / Develop	Alan Kennedy	2-10-03	Alan Kennedy 9/2/03
2. FERRY L. ROSE	Sr. Eng. / Support	Ferry L. Rose	2-10-03	Ferry L. Rose 9/2/03
3. MARK VAN SICKEN	SUPERVISOR OPERATE INVENT TEAM	Mark Van Sicken	3-12-03	Mark Van Sicken 9/2/03
4. MARK GARRISON	CNO / VALIDATE	Mark Garrison	4-7-03	Mark Garrison per Telco 9-8-03
5. MAX HINE	CNS / VALIDATE	Max Hine	4/9/03	Max Hine per Telco 9-4-03
6. SHAROLD BOWDEN	Performance Technologist / Quality Review	Sharold Bowden	4-9-03	Sharold Bowden 9-9-03
7. BRENT FRANKER	CNO	Brent Franker	7-15-03	Brent Franker per Telco 7/15/03
8. CHRISTOPHER FALLOUT	Operations Specialist	Christopher Fallout	7/15/03	Christopher Fallout 9-8-03
9. BRUCE WILMS	CNO	Bruce Wilms	7-28-03	Bruce Wilms per Telco 9-8-03
10. ANTHONY WASHINGTON	Inst	Anthony Washington	7-28-03	Anthony Washington 9/10/03
11. EDWARD SMITH	INSTRUCTOR I & C	Edward Smith	8/14/03	Edward Smith 9/20/03
12. MARK GREENE	Inst	Mark Greene	8/14/03	Mark Greene 9/20/03
13. JAMES MORTON	Principal Engineer	James Morton	8/14/03	James Morton 9/20/03
14. K. LEE LINTON JR.	Instructor / Develop	K. Lee Linton Jr.	8/14/03	K. Lee Linton Jr. 9/20/03
15. MELISSA GALLIAN		Melissa Gallian	8/14/03	Melissa Gallian 9/20/03

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 8-25-03 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 8-25-03. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. CURTIS WELLS	AMO / SIM ROOM	<i>W. Wells</i>	8/25/03	<i>Curtis Wells post-ex</i>	9-9-03	
2. John W. Smith	SIM ROOM	<i>John W. Smith</i>	8/27/03	<i>John W. Smith</i>	9-2-03	
3. Christine McKinn	Nuc Ops Eval / Sim	<i>Christine McKinn</i>	8-27-03	<i>Christine McKinn</i>	9-2-03	
4. David P. Jones	Assisting MSO	<i>David P. Jones</i>	8-27-03	<i>David P. Jones</i>	9-4-03	
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NOTES:

Facility: Crystal River Unit 3Date of Examination: August 25, 2003

Exam Level (circle one): RO/SRO

Operating Test No.: 1

Administrative Topic (see Note)	Describe activity to be performed:
Conduct of Operations	<u>RO & SRO</u> - Print Reading - Determine criteria for start of AHF-44B during a LOOP. K/A - G2.1.24 RO 2.8 SRO 3.1 Multiple electrical prints and flow diagrams [New]
	<u>RO & SRO</u> - Perform a Daily Heat Balance Comparison K/A - G2.1.23 RO 3.9 SRO 4.0 SP-312A [Modified Bank] <u>SRO Only</u> - After completing heat balance determine required TS actions K/A - G2.1.12 SRO 4.0
Equipment Control	<u>RO & SRO</u> - Perform an RCS Water Inventory Balance per SP-317 K/A - G2.2.12 RO 3.0 SRO 3.4 SP-317 [Direct] <u>SRO Only</u> - After completing SP-317 determine required TS actions K/A - G2.1.12 SRO 4.0
Radiation Control	<u>SRO Only</u> - Determine external reporting requirements per CP-151 K/A - G2.3.1 SRO 3.0 CP-151 & NUREG-1022 [New]
Emergency Plan	<u>RO Only</u> - Complete the State of Florida Notification Message Form and make required notifications K/A - G2.4.43 RO 2.8 EM-202 [New, Alternate Path]
	<u>SRO Only</u> - Determine Emergency Action Level after Simulator Scenario # 2. K/A - G2.4.41 SRO 4.1 EM-202 [New]
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.	

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Facility: Crystal River Unit 3Date of Examination: August 25, 2003Exam Level: **RO**

Operating Test No.: 1

Administrative Topic (see Note)	Describe activity to be performed:
Conduct of Operations	<i>Print Reading - Determine criteria for start of AHF-44B during a LOOP.</i> K/A - G2.1.24 RO 2.8 SRO 3.1 Multiple electrical prints and flow diagrams [New]
	<i>Perform a Daily Heat Balance Comparison</i> K/A - G2.1.23 RO 3.9 SRO 4.0 SP-312A [Modified Bank]
Equipment Control	<i>Perform an RCS Water Inventory Balance per SP-317</i> K/A - G2.2.12 RO 3.0 SRO 3.4 SP-317 [Direct]
Radiation Control	
Emergency Plan	<i>Complete the State of Florida Notification Message Form and make required notifications</i> K/A - G2.4.43 RO 2.8 EM-202 [New, Alternate Path]
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.	

Facility: <u>Crystal River Unit 3</u>		Date of Examination: <u>August 25, 2003</u>
Exam Level: SRO		Operating Test No.: 1
Administrative Topic (see Note)	Describe activity to be performed:	
Conduct of Operations	<i>Print Reading – Determine criteria for start of AHF-44B during a LOOP.</i> K/A – G2.1.24 RO 2.8 SRO 3.1 Multiple electrical prints and flow diagrams [New]	
	<i>Perform a Daily Heat Balance Comparison</i> K/A – G2.1.23 RO 3.9 SRO 4.0 SP-312A [Modified Bank] <i>After completing heat balance determine required TS actions</i> K/A – G2.1.12 SRO 4.0	
Equipment Control	<i>Perform an RCS Water Inventory Balance per SP-317</i> K/A – G2.2.12 RO 3.0 SRO 3.4 SP-317 [Direct] <i>After completing SP-317 determine required TS actions</i> K/A – G2.1.12 SRO 4.0	
Radiation Control	<i>Determine external reporting requirements per CP-151</i> K/A – G2.3.1 SRO 3.0 CP-151 & NUREG-1022 [New]	
Emergency Plan	<i>Determine Emergency Action Level after Simulator Scenario # 2.</i> K/A - G2.4.41 SRO 4.1 EM-202 [New]	
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.		

Facility: Crystal River Unit 3Date of Examination: August 25, 2003

Exam Level (circle one): RO / SRO(I) / SRO(U)

Operating Test No.: 1

Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)

System / JPM Title	Type Code*	Safety Function
a. CRDS – Transfer control rod to auxiliary power supply K/A – 001A4.03 RO 4.0 SRO 3.7 (OP-502) [RO]	D, S	1
b. ESFAS – ES "B" HPI Diverse Containment Isolation Test K/A – 013A3.01 RO 3.7 SRO 3.9 (SP-358A) [RO, SRO-U, SRO-I]	A, D, S	2
c. PZR PCS – Perform PORV Exercise Test K/A – 010A3.01 RO 3.0 SRO 3.2 (SP-379) [RO, SRO-U, SRO-I]	L, N, S	3
d. RHR – Perform a crosstie of DHR flow to the Reactor Vessel K/A – 005A1.02 RO 3.3 SRO 3.4 (OP-404) [RO, SRO-U, SRO-I]	L, D, S	4
e. CSS – Ensure Building Spray actuation K/A – 026A3.01 RO 4.3 SRO 4.5 (EM-225C) [RO, SRO-I]	A, D, S	5
f. AC – Perform actions for loss of an ES 4160V Bus K/A – 062A2.12 RO 3.2 SRO 3.6 (AP-770) [RO, SRO-I]	A, M, S	6
g. RPS – Place the RPS in Shutdown Bypass. K/A – 012A4.03 RO 3.6 SRO 3.6 (OP-202/507) [RO, SRO-I]	L, D, S	7
h. WGDS/PRM – Perform actions for an accidental Waste Gas leak K/A – 060AA2.05 RO 3.7 SRO 4.2 (AP-250) [RO, SRO-I]	A, C, N, S	9
SPARE MU – Restart a MUP Following an RCS Leak Isolation K/A – 002A2.01 RO 4.3 SRO 4.4 (AP-520)	D, S	2
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. AFW/EFW – Place EFIC Channel in Tripped condition K/A – 061A2.05 RO 3.1 SRO 3.4 (OP-450) [RO, SRO-I]	N	4
j. CCWS – Fill SW surge tank from the Fire Service system K/A – 008A1.04 RO 3.1 SRO 3.2 (EOP-14, Enclosure 2) [RO, SRO-U, SRO-I]	D, R	8
k. CRD – Manually trip reactor from outside control room K/A – 02EA1.1 RO 4.0 SRO 3.6 (AP-990) [RO, SRO-U, SRO-I]	A, D	1
SPARE FS/OTSG – Transfer excess secondary inventory to FST K/A – 037AK3.07 RO 4.2 SRO 4.4 (EOP-14 Enclosure 9)	D	2, 8
*Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

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Facility: Crystal River Unit 3Date of Examination: August 25, 2003Exam Level: **RO**

Operating Test No.: 1

Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)

System / JPM Title	Type Code*	Safety Function
a. CRDS – Transfer control rod to auxiliary power supply K/A – 001A4.03 RO 4.0 SRO 3.7 (OP-502)	D, S	1
b. ESFAS – ES "B" HPI Diverse Containment Isolation Test K/A – 013A3.01 RO 3.7 SRO 3.9 (SP-358A)	A, D, S	2
c. PZR PCS – Perform PORV Exercise Test K/A – 010A3.01 RO 3.0 SRO 3.2 (SP-379)	L, N, S	3
d. RHR – Perform a crosstie of DHR flow to the Reactor Vessel K/A – 005A1.02 RO 3.3 SRO 3.4 (OP-404)	L, D, S	4
e. CSS – Ensure Building Spray actuation K/A – 026A3.01 RO 4.3 SRO 4.5 (EM-225C)	A, D, S	5
f. AC – Perform actions for loss of an ES 4160V Bus K/A – 062A2.12 RO 3.2 SRO 3.6 (AP-770)	A, M, S	6
g. RPS – Place the RPS in Shutdown Bypass. K/A – 012A4.03 RO 3.6 SRO 3.6 (OP-202/507)	L, D, S	7
h. WGDS/PRM – Perform actions for an accidental Waste Gas leak K/A – 060AA2.05 RO 3.7 SRO 4.2 (AP-250)	A, C, N, S	9
SPARE MU – Restart a MUP Following an RCS Leak Isolation K/A – 002A2.01 RO 4.3 SRO 4.4 (AP-520)	D, S	2

In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)

i. AFW/EFW – Place EFIC Channel in Tripped condition K/A – 061A2.05 RO 3.1 SRO 3.4 (OP-450)	N	4
j. CCWS – Fill SW surge tank from the Fire Service system K/A – 008A1.04 RO 3.1 SRO 3.2 (EOP-14, Enclosure 2)	D, R	8
k. CRD – Manually trip reactor from outside control room K/A – 02EA1.1 RO 4.0 SRO 3.6 (AP-990)	A, D	1
SPARE FS/OTSG – Transfer excess secondary inventory to FST K/A – 037AK3.07 RO 4.2 SRO 4.4 (EOP-14 Enclosure 9)	D	2, 8

*Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

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Facility: Crystal River Unit 3Date of Examination: August 25, 2003Exam Level: **SRO(I)**

Operating Test No.: 1

Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)

System / JPM Title	Type Code*	Safety Function
b. ESFAS – ES “B” HPI Diverse Containment Isolation Test K/A – 013A3.01 RO 3.7 SRO 3.9 (SP-358A)	A, D, S	2
c. PZR PCS – Perform PORV Exercise Test K/A – 010A3.01 RO 3.0 SRO 3.2 (SP-379)	L, N, S	3
d. RHR – Perform a crosstie of DHR flow to the Reactor Vessel K/A – 005A1.02 RO 3.3 SRO 3.4 (OP-404)	L, D, S	4
e. CSS – Ensure Building Spray actuation K/A – 026A3.01 RO 4.3 SRO 4.5 (EM-225C)	A, D, S	5
f. AC – Perform actions for loss of an ES 4160V Bus K/A – 062A2.12 RO 3.2 SRO 3.6 (AP-770)	A, M, S	6
g. RPS – Place the RPS in Shutdown Bypass. K/A – 012A4.03 RO 3.6 SRO 3.6 (OP-202/507)	L, D, S	7
h. WGDS/PRM – Perform actions for an accidental Waste Gas leak K/A – 060AA2.05 RO 3.7 SRO 4.2 (AP-250)	A, C, N, S	9
SPARE MU – Restart a MUP Following an RCS Leak Isolation K/A – 002A2.01 RO 4.3 SRO 4.4 (AP-520)	D, S	2

In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)

i. AFW/EFW – Place EFIC Channel in Tripped condition K/A – 061A2.05 RO 3.1 SRO 3.4 (OP-450)	N	4
j. CCWS – Fill SW surge tank from the Fire Service system K/A – 008A1.04 RO 3.1 SRO 3.2 (EOP-14, Enclosure 2)	D, R	8
k. CRD – Manually trip reactor from outside control room K/A – 02EA1.1 RO 4.0 SRO 3.6 (AP-990)	A, D	1
SPARE FS/OTSG – Transfer excess secondary inventory to FST K/A – 037AK3.07 RO 4.2 SRO 4.4 (EOP-14 Enclosure 9)	D	2, 8

*Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

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Facility: Crystal River Unit 3Date of Examination: August 25, 2003Exam Level: **SRO(U)**

Operating Test No.: 1

Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)

System / JPM Title	Type Code*	Safety Function
b. ESFAS – ES "B" HPI Diverse Containment Isolation Test K/A – 013A3.01 RO 3.7 SRO 3.9 (SP-358A)	A, D, S	2
c. PZR PCS – Perform PORV Exercise Test K/A – 010A3.01 RO 3.0 SRO 3.2 (SP-379)	L, N, S	3
d. RHR – Perform a crosstie of DHR flow to the Reactor Vessel K/A – 005A1.02 RO 3.3 SRO 3.4 (OP-404)	L, D, S	4
SPARE MU – Restart a MUP Following an RCS Leak Isolation K/A – 002A2.01 RO 4.3 SRO 4.4 (AP-520)	D, S	2

In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)

j. CCWS – Fill SW surge tank from the Fire Service system K/A – 008A1.04 RO 3.1 SRO 3.2 (EOP-14, Enclosure 2)	D, R	8
k. CRD – Manually trip reactor from outside control room K/A – 02EA1.1 RO 4.0 SRO 3.6 (AP-990)	A, D	1
SPARE FS/OTSG – Transfer excess secondary inventory to FST K/A – 037AK3.07 RO 4.2 SRO 4.4 (EOP-14 Enclosure 9)	D	2, 8

*Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA