

Facility: CALVERT CLIFFSDate of Examination: 7/11-13/02Examinations Developed by: Facility / 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)	<i>A</i>
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	<i>A</i>
-120	3. Facility contact briefed on security & other requirements (C.2.c)	<i>A</i>
-120	4. Corporate notification letter sent (C.2.d)	<i>A</i>
[-90]	[5. Reference material due (C.1.e; C.3.c)]	<i>A</i>
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	<i>A</i>
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	<i>A</i>
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	<i>A</i>
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	<i>A</i>
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	<i>A</i>
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	<i>A</i>
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	<i>A</i>
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	<i>A</i>
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	<i>A</i>
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	<i>A</i>
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	<i>A</i>

* 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.

[] Applies only to examinations prepared by the NRC.

Facility:		Date of Examination:			
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.	new	✓	✓	
	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.	new	✓	✓	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	new	✓	✓	
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	new	✓	✓	
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.	new	✓	✓	
	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 over successive days.	new	✓	✓	
	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.	new	✓	✓	
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.	new	✓	✓	
	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) 40% 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.	new	✓	✓	
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	new	✓	✓	
	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 successive days.	new	✓	✓	
	e. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	new	✓	✓	
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.	new	✓	✓	
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	new	✓	✓	
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	new	✓	✓	
	d. Check for duplication and overlap among exam sections.	new	✓	✓	
	e. Check the entire exam for balance of coverage.	new	✓	✓	
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	new	✓	✓	
a. Author		Michael Wasem		Printed Name / Signature	Date
b. Facility Reviewer (*)		William Burney			3/30/02
c. NRC Chief Examiner (#)		J. O'Neil			4-18-02
d. NRC Supervisor		Richard V. Conti			5/22/02
Note: * Not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.					

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12-19 July 2002 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 12-19 July 2002. 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. SCOTT ATWATER	OPERATIONS INSTRUCTOR	Scott Atwater	12/18/01	Scott Atwater	7/19/02
2. Mike Wagon	Exam Developer / Writer	Mike Wagon	12/18/01	Mike Wagon	7/19/02
3. Jim Kellum	OP's Instructor	Jim Kellum	3/11/02	Jim Kellum	7/19/02
4. EDWARD J. CHRENDOSKI	SIMULATOR SUPPORT / SIM	Edward J. Chrendoski	3/25/02	Edward J. Chrendoski	7/19/02
5. WILLIAM GUNTER	CRO - Exam Validation	William Gunter	3/1/02	William Gunter	7/22/02
6. W. P. SURNEY	S-RTU - FAC REP	W. P. Surney	3-7-02	W. P. Surney	7-19-02
7. Denise A. Nelson	SR Admin Asst - RTU - admin	Denise A. Nelson	3-22-02	Denise Nelson	7/19/02
8. Michelle Draxton	TRNG Specialist	Michelle Draxton	4-3-02	Michelle Draxton	7/18/02
9. Ashley Bless	System Support Tech	Ashley Bless	4-11-02	Ashley Bless	7/24/02
10. Gregg Buchanan	Fin Term Operator	Gregg Buchanan	4-12-02	Gregg Buchanan	7/19/02
11. Robert V. Pace	Supervisor - WCU	Robert V. Pace	4-23-02	Robert V. Pace	7/24/02
12. James Barton	CRO / Imm	James Barton	4-23-02	James Barton	7-19-02
13. STEVEN J. BARGER	CRO	Steven J. Barger	4-29-02	Steven J. Barger	7/22/02
14. Denise M. Terracciano	Sr Admin - TTU	Denise M. Terracciano	5-7-02	Denise Terracciano	7-22-02 *
15. KERRY HUMMER	CRO OPS INSTRUCTOR	Kerry Hummer	5/13/02	Kerry Hummer	7/19/02

NOTES: * Name has now changed to Denise Terracciano as of June 13, 2002 Denise Terracciano 7-22-02
2002 JUL 26 AM 10:32 RECEIVED REGION 1

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12-19 July 2002 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 12-19 July 2002. 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. <u>Erwin D. AENAGHI</u>	<u>PROJECT MANAGER, PES</u>	<u>[Signature]</u>	<u>5/24/02</u>	<u>[Signature]</u>	<u>7/19/02</u>
2. <u>Kent Mills</u>	<u>GS-MPO</u>	<u>[Signature]</u>	<u>7/8/02</u>	<u>[Signature]</u>	<u>7/19/02</u>
3. <u>ROBERT HOWARTH</u>	<u>SSWG CRO</u>	<u>[Signature]</u>	<u>7-8-02</u>	<u>[Signature]</u>	<u>7-22-02</u>
4. <u>DAVID HOLAN</u>	<u>OPERATIONS MANAGER</u>	<u>[Signature]</u>	<u>7-10-02</u>	<u>[Signature]</u>	<u>7-23-02</u>
5. <u>KEITH DROWN</u>	<u>SRO INSTRUCTOR/PROCTOR</u>	<u>[Signature]</u>	<u>7-10-02</u>	<u>[Signature]</u>	<u>7-19-02</u>
6. <u>TIM RITI</u>	<u>SRO Instructor/Proctor</u>	<u>[Signature]</u>	<u>7-10-02</u>	<u>[Signature]</u>	<u>7-18-02</u>
7. <u>JOHN HORNICK</u>	<u>SUP-ITU/FAC REP EXAM WEEK</u>	<u>[Signature]</u>	<u>7/10/02</u>	<u>[Signature]</u>	<u>7/18/02</u>
8. <u>Monty Seckins</u>	<u>GS-OT</u>	<u>[Signature]</u>	<u>7/10/02</u>	<u>[Signature]</u>	<u>7/18/02</u>
9. <u>ROBERT W. SCOTT</u>	<u>SRO INSTRUCTOR/PROCTOR</u>	<u>[Signature]</u>	<u>7-11-02</u>	<u>[Signature]</u>	<u>7-19-02</u>
10. <u>J.W. Holmes</u>	<u>SRO INSTRUCTOR/PROCTOR</u>	<u>[Signature]</u>	<u>7-12-02</u>	<u>[Signature]</u>	<u>7/19/02</u>
11. <u>CS Jay</u>	<u>SRO INSTRUCTOR/PROCTOR</u>	<u>[Signature]</u>	<u>7-12-02</u>	<u>[Signature]</u>	<u>7/19/02</u>
12.			<u>7-15-02</u>	<u>[Signature]</u>	<u>7/19/02</u>
13.					
14.					
15.					

NOTES:

Facility:		Date of Examination:		Operating Test Number:		
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).			/	SD	1
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.			/	SD	1
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).			/	SD	1
d.	Overlap with the written examination and between operating test categories is within acceptable limits.			/	SD	1
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			/	SD	1
2. WALK-THROUGH (CATEGORY A & B) 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 					
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.					
c.	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.					
d.	At least 20 percent of the JPMs on each test are new or significantly modified.					
3. SIMULATOR (CATEGORY C) CRITERIA						
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.			/	SD	1
		Printed Name / Signature		Date		
a.	Author	James C. Kellum		5/23/02		
b.	Facility Reviewer(*)	WILLIAM P. BIRNEY		5-23-02		
c.	NRC Chief Examiner (#)	J. DANON		4/12/02		
d.	NRC Supervisor	R. J. Conte		2/11/02		
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.						

* Scenarios only

Facility:		Date of Examination:		Operating Test Number:		
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).			new	✓	✓
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.			new	✓	✓
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).			new	✓	✓
d.	Overlap with the written examination and between operating test categories is within acceptable limits.			new	✓	✓
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			new	✓	✓
2. WALK-THROUGH (CATEGORY A & B) 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 			new	✓	✓
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.			new	✓	✓
c.	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.			new	✓	✓
d.	At least 20 percent of the JPMs on each test are new or significantly modified.			new	✓	✓
3. SIMULATOR (CATEGORY C) CRITERIA				-	-	-
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.			N/A	* N/A	previous
		Printed Name / Signature		Date		
a. Author	Michael L. Wasem / <i>me Wasem</i>		5/31/02			
b. Facility Reviewer(*)	William P. Birney / <i>William P. Birney</i>		5-31-02			
c. NRC Chief Examiner (#)	J. D'Amico / <i>J. D'Amico</i>		6/12/02			
d. NRC Supervisor	R.J. Conte / <i>R.J. Conte</i>		2/11/02			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.						

* previously submitted

Facility: <i>CCNPP</i>		Date of Exam: <i>7/15/02</i>		Scenario Numbers: <i>*1213</i>		Operating Test No.: <i>1</i>	
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.	<i>/</i>	<i>DS</i>	<i>N</i>			
2.	The scenarios consist mostly of related events.	<i>/</i>	<i>DS</i>	<i>N</i>			
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)	<i>/</i>	<i>DS</i>	<i>N</i>			
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.	<i>/</i>	<i>DS</i>	<i>N</i>			
5.	The events are valid with regard to physics and thermodynamics.	<i>/</i>	<i>DS</i>	<i>N</i>			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	<i>/</i>	<i>DS</i>	<i>N</i>			
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.	<i>N/A</i>	<i>N/A</i>	<i>-</i>			
8.	The simulator modeling is not altered.	<i>/</i>	<i>DS</i>	<i>N</i>			
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	<i>/</i>	<i>DS</i>	<i>N</i>			
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.4 of ES-301.	<i>/</i>	<i>DS</i>	<i>N</i>			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	<i>/</i>	<i>DS</i>	<i>N</i>			
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).	<i>/</i>	<i>DS</i>	<i>N</i>			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<i>/</i>	<i>DS</i>	<i>N</i>			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes					
1.	Total malfunctions (5-8)	<i>9</i>	<i>9</i>	<i>/</i>	<i>DS</i>		
2.	Malfunctions after EOP entry (1-2)	<i>3</i>	<i>2</i>	<i>/</i>	<i>DS</i>		
3.	Abnormal events (2-4)	<i>2</i>	<i>2</i>	<i>/</i>	<i>DS</i>		
4.	Major transients (1-2)	<i>2</i>	<i>2</i>	<i>/</i>	<i>DS</i>		
5.	EOPs entered/requiring substantive actions (1-2)	<i>1</i>	<i>1</i>	<i>/</i>	<i>DS</i>		
6.	EOP contingencies requiring substantive actions (0-2)	<i>1</i>	<i>0</i>	<i>/</i>	<i>DS</i>		
7.	Critical tasks (2-3)	<i>2</i>	<i>3</i>	<i>/</i>	<i>DS</i>		

* Scenario #1 is the spare functional

Facility: <u>CCNPP</u>		Date of Exam: <u>7/15/02</u>		Scenario Numbers: <u>41</u> /		Operating Test No.:	
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2.	The scenarios consist mostly of related events.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5.	The events are valid with regard to physics and thermodynamics.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
8.	The simulator modeling is not altered.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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.4 of ES-301.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes	-	-	-	-	
1.	Total malfunctions (5-8)	8 1 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2.	Malfunctions after EOP entry (1-2)	3 1 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
3.	Abnormal events (2-4)	2 1 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
4.	Major transients (1-2)	1 1 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
5.	EOPs entered/requiring substantive actions (1-2)	1 1 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
6.	EOP contingencies requiring substantive actions (0-2)	0 1 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
7.	Critical tasks (2-3)	2 1 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

* Scenario #4 is the spare optimal

OPERATING TEST NO.:

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO Ro/B&P	Reactivity	1	5	5	4	1
	Normal	1	-	-	-	-
	Instrument / Component	4	2,3 1,4	3,4 1,2	1,2,4 3,4	3,4 2,5
	Major	1	6,7 6,7	6,7 6,7	5,6 5,6	6 6
As RO	Reactivity	1	5	5	4	1
	Normal	0	-	-	-	-
	Instrument / Component	2	2,3	3,4	1,2,4	3,4
	Major	1	6,7	6,7	5,6	6
SRO-I						
As SRO	Reactivity	0	-	-	-	-
	Normal	1	5	5	4	1
	Instrument / Component	2	1-4	1-4	1-4	2-5
	Major	1	6,7	6,7	5,6	6
SRO-U						
	Reactivity	0	-	-	-	-
	Normal	1	5	5	4	1
	Instrument / Component	2	1-4	1-4	1-4	2-5
	Major	1	6,7	6,7	5,6	6

- 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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:

NRC Reviewer:

Competencies	Applicant #1 RO/SRO-I/SRO-U				Applicant #2 RO/SRO-I/SRO-U				Applicant #3 RO/SRO-I/SRO-U			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Understand and Interpret Annunciators and Alarms	1-7	1-7	1,3-6	2-7	2-7	3-7	1,4-6	3-7	1,4-7	1,2 5-7	3-6	2,4-7
Diagnose Events and Conditions	1-7	1-7	1-6	2-7	2-7	3-7	1,2 4-6	3-7	1,4-7	1,2 5-7	3-6	2,4-7
Understand Plant and System Response	1-7	1-7	1-6	1-7	2-7	2-7	1,2 4-6	1,3-7	1,4-7	1-3 5-7	3-6	1,2 4-7
Comply With and Use Procedures (1)	1-7	1-7	1-6	1-7	2,3 5-7	2-7	1,2 4-6	1,3-7	1,4-7	1,2 5-7	3-6	1,2 4-7
Operate Control Boards (2)	N/A	N/A	N/A	N/A	2-7	2-7	1,2 4-6	1,3-7	1,4-7	1,2 5-7	3-6	1,2 4-7
Communicate and Interact With the Crew	1-7	1-7	1-6	1-7	1-7	2-7	1,2 4-6	1,3-7	1,4-7	1-3 5-7	3-6	1,2 4-7
Demonstrate Supervisory Ability (3)	1-7	1-7	1-6	1-7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Comply With and Use Tech. Specs. (3)	1	4	1	4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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:

J. C. Hill

NRC Reviewer:

J. Hill

Written Examination
Quality Checklist

Facility: <u>CCNPP Units 1 & 2</u>		Date of Exam: <u>12 July, 2002</u>		Exam Level: <u>RO/SRO</u>		
Item Description	Initial					
	a	b*	c*			
1. Questions and answers technically accurate and applicable to facility	<u>mw</u>	<u>SP</u>	<u>2</u>			
2. a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	<u>mw</u>	<u>SP</u>	<u>2</u>			
3. RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401	<u>mw</u>	<u>SP</u>	<u>2</u>			
4. Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process	<u>mw</u>	<u>SP</u>	<u>2</u>			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input checked="" type="checkbox"/> the examinations were developed independently; or <input type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain) <u>54 18 28</u>	<u>mw</u>	<u>SP</u>	<u>2</u>			
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 question distribution at right	Bank <u>56</u>	Modified <u>17</u>	New <u>27</u>	<u>mw</u>	<u>SP</u>	<u>2</u>
7. Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory <u>47 48</u>	C/A <u>53 52</u>		<u>mw</u>	<u>SP</u>	<u>2</u>
8. References/handouts provided do not give away answers	<u>mw</u>	<u>SP</u>	<u>2</u>			
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	<u>mw</u>	<u>SP</u>	<u>2</u>			
10. Question psychometric quality and format meet ES, Appendix B, guidelines	<u>mw</u>	<u>SP</u>	<u>2</u>			
11. The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet	<u>mw</u>	<u>SP</u>	<u>2</u>			
Printed Name / Signature a. Author <u>Michael L. Wasem</u> b. Facility Reviewer (*) <u>William P. Birney</u> c. NRC Chief Examiner (#) <u>J. J. Johnson</u> d. NRC Regional Supervisor <u>R. J. Conter</u>				Date <u>5/31/02</u> <u>5-31-02</u> <u>7/6/02</u> <u>7/11/02</u>		
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.						

Facility: <u>Calvert Cliffs Units 1 and 2</u>		Date of Exam: <u>July 12, 2002</u>		Exam Level: <u>RO/SRO</u>																	
Item Description				Initial																	
				a	b*	c*															
1.	Questions and answers technically accurate and applicable to facility			new	<i>[Signature]</i>	<i>[Signature]</i>															
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			new	<i>[Signature]</i>	<i>[Signature]</i>															
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401			new	<i>[Signature]</i>	<i>[Signature]</i>															
4.	Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process					<i>[Signature]</i>															
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input checked="" type="checkbox"/> the examinations were developed independently; or <input type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)			new	<i>[Signature]</i>	<i>[Signature]</i>															
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 question distribution at right	Bank	Modified	New																	
		56 ²	21 ²³	23 ²⁵	new	<i>[Signature]</i>															
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory	C/A																		
		45 44	55 56	new	<i>[Signature]</i>	<i>[Signature]</i>															
8.	References/handouts provided do not give away answers			new	<i>[Signature]</i>	<i>[Signature]</i>															
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			new	<i>[Signature]</i>	<i>[Signature]</i>															
10.	Question psychometric quality and format meet ES, Appendix B, guidelines			new	<i>[Signature]</i>	<i>[Signature]</i>															
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet			new	<i>[Signature]</i>	<i>[Signature]</i>															
<table border="0"> <thead> <tr> <th></th> <th>Printed Name / Signature</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>a. Author</td> <td><u>Michael L. Wasem / Michael L. Wasem</u></td> <td><u>5/21/02</u></td> </tr> <tr> <td>b. Facility Reviewer (*)</td> <td><u>William P. Birney / William P. Birney</u></td> <td><u>5-31-02</u></td> </tr> <tr> <td>c. NRC Chief Examiner (#)</td> <td><u>J. J. [Signature]</u></td> <td><u>7/2/02</u></td> </tr> <tr> <td>d. NRC Regional Supervisor</td> <td><u>R. J. Cate / R. J. Cate</u></td> <td><u>7/11/02</u></td> </tr> </tbody> </table>								Printed Name / Signature	Date	a. Author	<u>Michael L. Wasem / Michael L. Wasem</u>	<u>5/21/02</u>	b. Facility Reviewer (*)	<u>William P. Birney / William P. Birney</u>	<u>5-31-02</u>	c. NRC Chief Examiner (#)	<u>J. J. [Signature]</u>	<u>7/2/02</u>	d. NRC Regional Supervisor	<u>R. J. Cate / R. J. Cate</u>	<u>7/11/02</u>
	Printed Name / Signature	Date																			
a. Author	<u>Michael L. Wasem / Michael L. Wasem</u>	<u>5/21/02</u>																			
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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.																					

Facility:		Date of Exam:		Exam Level: RO/SRO		
Item Description		Initials				
		a	b	c		
1.	Clean answer sheets copied before grading	WD	RWA	JMO		
2.	Answer key changes and question deletions justified and documented	WD	RWA	N/A		
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	WD	RWA	JMO		
4.	Grading for all borderline cases (80% +/- 2%) reviewed in detail	WD	RWA	JMO		
5.	All other failing examinations checked to ensure that grades are justified	N/A	N/A	N/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	WD	RWA	JMO		

	Printed Name / Signature	Date
a. Grader	Michael H. Wexler / Wexler	2/18/02
b. Facility Reviewer(*)	Robert W. Scott / Robert W. Scott	2/18/02
c. NRC Chief Examiner (*)	J.M. O'Connell / J.M. O'Connell	2/23/02
d. NRC Supervisor (*)	R.J. Conte / R.J. Conte	2/3/02

(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.