

# Administrative Documents

## BRUNSWICK EXAM

50-2003-301

50-325 & 50-324

**FEBRUARY 10 - 14 & 19, 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-401-7
- ☒ 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: <u>Brunswick Steam Electric Plant U 1 &amp; 2</u>		Date of Examination: <u>February 2003</u>
Examinations Developed by: Facility / <u>NRC</u> (circle one)		
Target Date*	Task Description / Reference	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	RSB
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	RSB
-120	3. Facility contact briefed on security & other requirements (C.2.c)	RSB
-120	4. Corporate notification letter sent (C.2.d)	RSB
[-90]	[5. Reference material due (C.1.e; C.3.c)]	RSB
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	Region I/RSB
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	RSB
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	RSB
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	RSB
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	RSB
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	RSB
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	RSB
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	RSB
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	RSB
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	RSB
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	RSB
<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: Brunswick		Date of Examination: February 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.	100	N/A	100
	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.	100		100
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	100		100
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	100		100
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.	100	↓	100
	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.	100	N/A	100
	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.	100		100
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.	100		100
	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.	100		100
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	100		100
	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.	100		100
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.	100		100
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	100		100
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	100		100
	d. Check for duplication and overlap among exam sections.	100		100
	e. Check the entire exam for balance of coverage.	100		100
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	100	↓	100
a. Author <u>RICHARD S. BALDWIN / [Signature]</u> b. Facility Reviewer (*) <u>N/A</u> c. NRC Chief Examiner (#) <u>GEORGE T. HANSEN / [Signature]</u> d. NRC Supervisor <u>MICHAEL E. LEWIS / [Signature]</u>		Printed Name / Signature Date 03/17/03 4/14/03 4/14/03		
Note: * Not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.				

\* THE ORIGINAL WAS MIS PLACED AND COULD NOT BE FOUND.

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 02/10/03 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 02/10/03. 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
Tony Pearson	LOCT Supervisor	<i>[Signature]</i>	11/05/02	<i>[Signature]</i>	02/24/02
Keith A Bowden	LOI Instructor	<i>[Signature]</i>	1/6/03	<i>[Signature]</i>	2/20/03
Mark Holland	LOCT Instructor	<i>[Signature]</i>	1/7/03	<i>[Signature]</i>	2/24/03
Charles Van Slyke	Sr. Support	<i>[Signature]</i>	1/10/03	<i>[Signature]</i>	2/24/03
Edward Hawkins	Sr. Support	<i>[Signature]</i>	1/20/03	<i>[Signature]</i>	2/24/03
Mike Williams	Manager Operations	<i>[Signature]</i>	1/29/03	<i>[Signature]</i>	2/24/03
Curt Robert	LOI Instructor	<i>[Signature]</i>	1/31/03	<i>[Signature]</i>	2/25/03
Lee Carothers	SRO	<i>[Signature]</i>	1-31-03	<i>[Signature]</i>	2/25/03
Joel LeViner	LOI SUPERVISOR	<i>[Signature]</i>	1-31-03	<i>[Signature]</i>	2/24/03
John Williamson	LOI INSTRUCTOR	<i>[Signature]</i>	2-10-03	<i>[Signature]</i>	2/20/03
Annette Pope	Sr. Support	<i>[Signature]</i>	2-10-03	<i>[Signature]</i>	2/20/03
Heann Spence	DATA MANAGEMENT ASST.	<i>[Signature]</i>	2-11-03	<i>[Signature]</i>	2/20/03
DEBRA WILKIE	DATA MANAGEMENT ASST.	<i>[Signature]</i>	2-11-03	<i>[Signature]</i>	2/20/03
Chris Keenan	MSI - Sh. ft. ops	<i>[Signature]</i>	2-12-03	<i>[Signature]</i>	2/25-03
John Miller	SRO	<i>[Signature]</i>	2-14-03	<i>[Signature]</i>	2/20/03
Michael D. Williams	RO	<i>[Signature]</i>	2-14-03	<i>[Signature]</i>	2/20/03
NOTES: Robert A. Fawcett	RO	<i>[Signature]</i>	2-14-03	<i>[Signature]</i>	2/25/03

Facility: <u>  Brunswick  </u>		Date of Examination: <u>  February 2003  </u>
Examination Level (circle one): <u>  RO  </u> / SRO		Operating Test Number: <u>          </u>
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	GEN	JPM Complete Jet Pump Operability per OPT-13.1 <i>Note: Data will indicate a failed Jet Pump.</i>
A.1.1	2.1.33/2.2.12 (4.0)	
A.1.2	GEN 2.1.5 (2.3/3.4)	JPM Evaluate Overtime Eligibility
A.2	GEN 2.2.14/2.2.11 (2.5)	JPM Given an approved Temporary Change (TC) make the necessary changes to the applicable drawings.
A.3	GEN 2.3.10 (2.9/3.0)  2.3.1 (2.6/3.0)	<p>1.. You have been notified by the Refuel Floor SRO that a spent fuel element has just dropped into the fuel pool and he is evacuating the reactor building.</p> <p>A. What action must you take to protect yourself from any ensuing radiation? (.5)</p> <p>B. How long do you have to accomplish this? (.3) And</p> <p>C. What is the allowable stay time in the Control Room. (.2) Cite References.</p> <p>2. Determine which operator obtains a lower dose for 2 operators using different paths.</p>
A.4	GEN 2.4.39 (3.3/3.1)	JPM Estimate Release from Unit 1 Reactor Building and Turbine Building Per PEP-03.6.1.

Facility: <u>  Brunswick  </u>		Date of Examination: <u>  February 2003  </u>
Examination Level (circle one): RO / <u><b>SRO</b></u>		Operating Test Number: <u>          </u>
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	GEN	JPM Complete Jet Pump Operability per OPT-13.1 <i>Note: Data will indicate a failed Jet Pump.</i>
A.1.1	2.1.33/2.2.12 (4.0)	
A.1.2	GEN	JPM
	2.2.32/2.2.27 (3.5)	Using a prepared, partial view of the newly refueled core and Core Loading Plan, determine if the core loading has been done correctly.
A.2	GEN	JPM
	2.2.14/2.2.11 (3.0)	Given an approved Temporary Change (TC) complete SRO responsibilities for installation per OOLP-22.
A.3	GEN	JPM
	2.3.6 (3.1)	Given data provided by the on-shift Chemistry Technician, issue a Liquid Radwaste Discharge per OOP-06.4
A.4	GEN	JPM
	2.4.40 (4.0)	Determine Off-Site Release Per PEP-03.4.7 and Recommend Protective Actions.

Facility: <u>Brunswick</u>		Date of Examination: <u>February 2003</u>
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: _____
<b>B.1 Control Room Systems</b>		
System / JPM Title	Type Code*	Safety Function
a. Reactor Recirculation Pump Start - Recirculation Pump Speed Control Failure (BNP-03-B1a)	(D)(A)(S)	1
b. Reduce RPV water level using RWCU to Radwaste (BNP-	(N)(S)	2
c. Emergency equalization around MSIVs using Hard Card (BNP-03-A1c)	(D)(S)	3
d. Shutdown Cooling Restoration With RHR Pump overload. (BNP-03-B1d)	(D)(A)(S) (L)	4
e. Vent the Drywell per OP-10 w/ Stack Rad Monitor Increase >50% (U) (BNP-03-B1e)	(D)(A)(S)	5
f. Manual Startup of Control Building Emergency Ventilation - Trip of One Fan (U), (BNP-03-B1f)	(N)(A)(S)	9
g. Core Performance Parameter Check- manual APRM GAF Adjustment Required (U) (BNP-03-B1g)	(D)(S)	7
<b>B.2 Facility Walk-Through</b>		
a. Start RCIC from remote S/D Panel (U) (BNP-03-B2a)	(D)(R)	2
b. Local Manual Start Of "A" DG using Prelube Start Control (BNP-03-B2b)	(D)	6
c. Fire Water Injection Using The Motor Driven Fire Pump (U) (BNP-03-B2c)	(M)(R)	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		

Facility: <u>BRUNSWICK</u>		Date of Examination: <u>2/10/03</u>		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).	Kaj	ES	100	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	Kaj	ES*	100	
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	Kaj	ES*	100	
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	Kaj	N/A	100	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	Kaj	ES	100	
2. WALK-THROUGH (CATEGORY A & B) CRITERIA			-	-	-
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> <li>• initial conditions</li> <li>• initiating cues</li> <li>• references and tools, including associated procedures</li> <li>* reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee</li> <li>• specific performance criteria that include: <ul style="list-style-type: none"> <li>- detailed expected actions with exact criteria and nomenclature</li> <li>- system response and other examiner cues</li> <li>- statements describing important observations to be made by the applicant</li> <li>- criteria for successful completion of the task</li> <li>- identification of critical steps and their associated performance standards</li> <li>- restrictions on the sequence of steps, if applicable</li> </ul> </li> </ul>	Kaj	ES	100	
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	Kaj	ES	100	
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.	Kaj	ES	100	
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	Kaj	ES	100	
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.	Kaj	ES	100	
Printed Name / Signature		Date			
a. Author	<u>GILBERT A. JOHNSON</u> <i>Gilbert A. Johnson</i>	<u>12/12/02</u>			
b. Facility Reviewer(**)	<u>Alan Blaney</u> <i>Alan Blaney</i> *	<u>12/12/02</u>			
c. NRC Chief Examiner (#)	<u>Mr. Richard J. Sneed</u>	<u>2/5/03</u>			
d. NRC Supervisor	<u>MR MICHAEL E. ERNITES</u> <i>Michael E. Ernites</i>	<u>2/6/03</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.					



Facility: <u>BRUNSWICK</u> Date of Exam: <u>2/03</u> Scenario Numbers: <u>11213</u> Operating Test No.: <u>1</u>		Initials		
QUALITATIVE ATTRIBUTES		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.	NAJ	SS	LAB
2.	The scenarios consist mostly of related events.	NAJ	SS	LAB
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	NAJ	SS	LAB
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. ( <u>PUMP VIBRATION</u> )	NAJ	SS	LAB
5.	The events are valid with regard to physics and thermodynamics.	NAJ	SS	LAB
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	NAJ	SS*	LAB
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.	NAJ	SS	LAB
8.	The simulator modeling is not altered.	NAJ	SS*	LAB
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.	N/A	N/A	LAB
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.	NAJ	SS	LAB
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	NAJ	SS	LAB
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).	NAJ	SS	LAB
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	NAJ	SS	LAB
<b>TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)</b>		Actual Attributes		
1.	Total malfunctions (5-8)	5, 4, 5, 3	NAJ	SS
2.	Malfunctions after EOP entry (1-2)	1, 1, 1, 1	NAJ	SS
3.	Abnormal events (2-4)	3, 1, 3, 2	NAJ	SS
4.	Major transients (1-2)	2, 1, 1, 1	NAJ	SS
5.	EOPs entered/requiring substantive actions (1-2)	2, 1, 2, 2	NAJ	SS
6.	EOP contingencies requiring substantive actions (0-2)	0, 1, 1, 1	NAJ	SS
7.	Critical tasks (2-3)	2, 3, 1, 1, 1, 2	NAJ	SS

## OPERATING TEST NO.: 1 - 3

Applicant Type	Evolution Type	Minimum Number	Scenario Number							
			RO1BOP		RO2BOP		RO3BOP		RO4BOP	
RO	Reactivity	1	2		1,4		2			
	Normal	1		1		1				
	Instrument / Component	4	3,4,6	5	2,3,6	3,5,6	1,3	2		
	Major	1	7	7	7	7	4	4		
As RO	Reactivity	1	2		1,4		2			
	Normal	0		1	2					
	Instrument / Component	2	3,4,6	5	2,3,6	3,5,6	1,3	2		
	Major	1	7	7	7	7	4	4		
SRO-I										
As SRO	Reactivity	0	2		1,4		3			
	Normal	1	1		2		1,2			
	Instrument / Component	2	3,4,5,6		2,3,6		4,5,6,7			
	Major	1	7		7		2			
SRO-U										
SRO-U	Reactivity	0	2		1,4		3			
	Normal	1	1		2		1,2			
	Instrument / Component	2	3,4,5,6		2,3,6		4,5,6,7			
	Major	1	7		7		2			

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:

Scenario 1, 2 and 3 - G. Johnson

NRC Reviewer:

R. Baldwin

Competencies	Applicant #1 RO				Applicant #2 SRO-I				Applicant #3 SRO-U			
	SCENARIO				SCENARIO RO SRO				SCENARIO SRO BOP			
	1	2	3	4	1	2	3	4	1	2	3	4
Understand and Interpret Annunciators and Alarms	3,4,5 6,7,8 ,9	2,3,5 6	1,2		3,4,5 6,7,8 ,9	2,3,5 ,6,7	1,2 ,		3,4, 6,5, 7,9	2,3,5 6	1,2 ,	
Diagnose Events and Conditions	3,4,6 8,7,9	2,3,5 6	1,2		3,4,6 8,7,9	2,3,5 ,6	1,2 ,3		3,4, 5,7, 9	2,3,5 6	1,2 ,3	
Understand Plant and System Response	2,7,9	1,4,5 6	2,3		2,7,9	2,5,6	1,2 ,3,		2,7, 9	1,4,5 6	1,2 ,3,	
Comply With and Use Procedures (1)	2,3,4 ,7,9	1,2,3 ,4,5, 6,7	1,2, 3		2,3,4 ,7,9	1,2,3 ,4,5, 6,7	1,2 ,3, 4		3,5, 7,9	1,2,3 ,4	1,2 ,3, 4	
Operate Control Boards (2)	1,2,3 ,6,4, 5	1,3, 4,5,6	1,2, 3,4		1,2,3 ,6,4, 5		?			1,3, 4,5,6	?	
Communicate and Interact With the Crew	1,2,3 ,4,5, 6,7,8 ,9	1,2,3 ,4,5, 6,7	1,2, 3,4		1,2,3 ,4,5, 6,7,8 ,9	3,4,5 ,6,7	1,2 ,3, 4		1,3, 4,5, 6,7, 8,9	1,2,3 ,4,5, 6,7	1,2 ,3, 4	
Demonstrate Supervisory Ability (3)						1,2,3 ,4,5, 6,7	1,2 ,3, 4		2,3, 4,5, 6,7, 8,9		1,2 ,3, 4	
Comply With and Use Tech. Specs. (3)						2,3	1		4		1	

**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: Gilbert Johnson \_\_\_\_\_

NRC Reviewer: Richard S. Baldwin \_\_\_\_\_

Facility: <u>BRUNSWICK</u>		Date of Exam: <u>02/19/03</u>		Exam Level: <u>RO/SRO</u>	
Item Description		Initial			
		a	b*	c*	
1.	Questions and answers technically accurate and applicable to facility	FSM	N/A	N/A	
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	FSM		N/A	
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401	FSM	↓	N/A	
4.	Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process			N/A	
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)	FSM	N/A 1	N/A	
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	
		34 40	10 11	56 49	
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	CIA		
		48 43	52 57		
8.	References/handouts provided do not give away answers	FSM		N/A	
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	FSM		N/A	
10.	Question psychometric quality and format meet ES, Appendix B, guidelines	FSM		N/A	
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet	FSM	↓	N/A	
Printed Name / Signature		Date			
a. Author	<u>Larry Mella / Larry S. Mella</u>	<u>2/10/03</u>			
b. Facility Reviewer (*)	<u>N/A</u>	<u>N/A</u>			
c. NRC Chief Examiner (#)	<u>George T. Hopper / George T. Hopper</u>	<u>2/10/03</u>			
d. NRC Regional Supervisor	<u>MIKE ERNSTER / Mike Ernster</u>	<u>2/10/03</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: Brunswick Steam Electric Plant Date of Exam: 2/19/03		Exam Level: <u>RO/SRO</u>	
Item Description	Initials		
	a	b	c
1. Clean answer sheets copied before grading	<i>ASB</i>	<i>N/A</i>	<i>ASB</i>
2. Answer key changes and question deletions justified and documented	<i>ASB</i>		<i>ASB</i>
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<i>ASB</i>		<i>ASB</i>
4. Grading for all borderline cases (80% +/- 2%) reviewed in detail	<i>ASB</i>		<i>ASB</i>
5. All other failing examinations checked to ensure that grades are justified	<i>N/A</i>		<i>ASB</i>
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	<i>ASB</i>	<i>↓</i>	<i>ASB</i>
Printed Name / Signature		Date	
a. Grader	<i>Richard S. Baldwin</i> Richard S. Baldwin	<u>2/26/03</u>	
b. Facility Reviewer(*)	<i>N/A</i>		
c. NRC Chief Examiner (*)	<i>George T. Hopper</i> George T. Hopper	<u>2/26/03</u>	
d. NRC Supervisor (*)	<i>Michael E. Ernstes</i> Michael E. Ernstes	<u>3/5/03</u>	
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.			

Brunswick Steam Electric Plant		February 2003
Task Description		Date Complete
1.	Facility written exam comments or graded exams received and verified complete	02/25/03
2.	Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	02/26/03
3.	Operating tests graded by NRC examiners	03/07/03
4.	NRC Chief examiner review of written exam and operating test grading completed	03/07/03
5.	Responsible supervisor review completed	03/13/03
6.	Management (licensing official) review completed	03/13/03
7.	License and denial letters mailed	NA
8.	Facility notified of results	03/13/03
9.	Examination report issued (refer to NRC MC 0610)	03/13/03
10.	Reference material returned after final resolution of any appeals	NA