

**Administrative Documents  
BRUNSWICK OCT/NOV 2004**

**EXAM 50-325, 324/2004-301  
OCTOBER 29, 2004 &  
NOVEMBER 2 - 10, 2004**

- |                                     |                                     |   |          |   |
|-------------------------------------|-------------------------------------|---|----------|---|
| <i>RJB</i>                          | <input checked="" type="checkbox"/> | 1. Exam Preparation Checklist . . . . .   | ES-201-1 | <i>BTM</i><br><input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 2. Exam Outline Quality Checklist . . . . .   | ES-201-2 | <input checked="" type="checkbox"/>               |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 3. Exam Security Agreement . . . . .  | ES-201-3 | <input checked="" type="checkbox"/>               |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 4. Administrative Topics Outline (Final) . . . . .                                  | ES-301-1 | <input checked="" type="checkbox"/>               |
| <input type="checkbox"/>            | <input type="checkbox"/>            | 5. Control Room Systems and Facility Walk-through Test Outline<br>(Final) . . . . . | ES-301-2 | <input checked="" type="checkbox"/>               |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 6. Operating Test Quality Check Sheet . . . . .                                     | ES-301-3 | <input checked="" type="checkbox"/>               |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 7. Simulator Scenario Quality Check Sheet . . . . .                                 | ES-301-4 | <input checked="" type="checkbox"/>               |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 8. Transient and Event Checklist . . . . .  | ES-301-5 | <input checked="" type="checkbox"/>               |
| <input type="checkbox"/>            | <input type="checkbox"/>            | 9. Competencies Checklist . . . . .   | ES-301-6 | <input checked="" type="checkbox"/>               |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 10. Written Exam Quality Check Sheet . . . . .                                      | ES-401-6 | <input checked="" type="checkbox"/>               |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 11. Written Exam Review Worksheet . . . . .   | ES-401-9 | <input checked="" type="checkbox"/>               |
| <input type="checkbox"/>            | <input type="checkbox"/>            | 12. Written Exam Grading Quality Checklist . . . . .                                | ES-403-1 | <input checked="" type="checkbox"/>               |
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | 13. Post-Exam Check Sheet . . . . .   | ES-501-1 | <input checked="" type="checkbox"/>               |
|                                     |                                     | <i>14 FACILITY CORRESPONDENCE DTD,<br/>5-20-2004<br/>7-27-2004<br/>9-15-2004</i>    |          |   |

Facility: <u>Brunswick Nuclear Plant</u>		Date of Examination: <u>11/01/04</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)	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)	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: <u>BRUNSWICK</u>		Date of Examination: <u>NOVEMBER 1 2004</u>		
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.	CR	MSD	MSD
	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.	CR	MSD	MSD
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	CR	MSD	MSD
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	CR	MSD	MSD
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.	CR	MSD	MSD
	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.	CR	MSD	MSD
	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.	CR	MSD	MSD
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.	CR	MSD	MSD
	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.	CR	MSD	MSD
	c. Verify that the required administrative topics are covered.	CR	MSD	MSD
	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.	CR	MSD	MSD
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.	CR	MSD	MSD
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	CR	MSD	MSD
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	CR	MSD	MSD
	d. Check for duplication and overlap among exam sections.	CR	MSD	MSD
	e. Check the entire exam for balance of coverage.	CR	MSD	MSD
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	CR	MSD	MSD
Printed Name / Signature		Date		
a. Author	<u>Curt Robert / Curt Robert</u>	<u>10/6/04</u>		
b. Facility Reviewer (*)	<u>Tom Pearson / Matt Smith</u>	<u>10/6/04</u>		
c. NRC Chief Examiner (#)	<u>Robert [Signature]</u>	<u>10/28/04</u>		
d. NRC Supervisor	<u>Don [Signature]</u>	<u>10/28/04</u>		
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 11/1/04 to 11/8/04 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 11/1/04 to 11/8/04. 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. Curt Robert	Sr. Nuc. Ops Instructor/Exam Developer	Curt Robert	11/14/04	Curt Robert	11/10/04	
2. Tony Pearce	Supervisor - LOR	AMP Pearce	04/20/04	AMP Pearce	11/10/04	
3. Michael Long	Reactor Operator	MP Long	7-7-04	MP Long	11-10-04	
4. Chuck Van Slyke	Simulator Support	Chuck Van Slyke	7/9/04	Chuck Van Slyke	11/10/04	
5. STUART BYRS	CRJ	Stuart Byrs	7/15/04	Stuart Byrs	11/10/04	
6. Edward Hawkins	Simulation Support	Edward Hawkins	9/23/04	Edward Hawkins	11/10/04	
7. DEBRA WILKIE	DATA MGMT ASST	Debra Wilkie	10/5/04	Debra Wilkie	11/10/04	
8. John Reinhard	Shift Super in Transfer - Training Center	John Reinhard	11/11/04	John Reinhard	11/10/04	
9. Leann Spencer	Data Management Asst.	Leann Spencer	11/11/04	Leann Spencer	11/10/04	
10. STEVE KNOTTS	TRAINING INSTR.	Steve Knotts	11/11/04	Steve Knotts	11/10/04	
11. Nils Dahl	Training Instr.	Nils Dahl	11/11/04	Nils Dahl	11/10/04	

NOTES:

1. Pre-Examination

11/8/04

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 11/1/04 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 (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). 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 11/8/04. 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. Keith A Bowdon	Instructor/Sim Operator	<i>Keith A Bowdon</i>	11/2/04	<i>Keith A Bowdon</i>	11/10/04	
2. JOEL P. LEVNER	Supv Ops Int. Technical Obsv	<i>Joel P Levner</i>	11/2/04	<i>Joel P Levner</i>	11/10/04	
3. Michael S Williams	Manager - Ops	<i>Michael S Williams</i>	11/2/04	<i>Michael S Williams</i>	11/10/04	
4. Richard S. Strahan	Maint. Fac.	<i>Richard S Strahan</i>	11-2-04	<i>Richard S Strahan</i>	11-2-04	
5. Veronica Strahan	Maint Fac.	<i>Veronica Strahan</i>	11-2-04	<i>Veronica Strahan</i>	11-2-04	
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

NOTES:

Facility: <u>Brunswick</u>		Date of Examination: <u>11/1/2004</u>	
Examination Level (circle one): SRO		Operating Test Number: <u>1</u>	
Administrative Topic (see Note)	Describe activity to be performed:		
Conduct of Operations	ADM1SROCOO - Determine SRM/IRM Overlap Per GP-02 and Technical Specifications.		
Conduct of Operations	ADM2SROCOO – Core Performance Parameter Check		
Equipment Control	ADM3SROEC - Develop a Clearance Boundary - RBCCW Pump 2C.		
Radiation Control	ADM4SR0RC – Evaluate Liquid Discharge Release Permit		
Emergency Plan	ADM5SROEP – Make Protective Action Recommendations per PEP-2.6.28		
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>Brunswick</u> Date of Examination: <u>11/1/2004</u>	
Examination Level (circle one): RO Operating Test Number: <u>1</u>	
Administrative Topic (see Note)	Describe activity to be performed-
Conduct of Operations	ADM1ROCOO - Determine SRM/IRM Overlap Per GP-02.
Conduct of Operations	ADM2ROCOO – Core Performance Parameter Check
Equipment Control	ADM3ROEC - Develop a Clearance Boundary - RBCCW Pump 2C.
Radiation Control	N/A
Emergency Plan	ADM4ROEP - Estimate Source Term for a Release from the Main Stack per PEP-03.6.1.
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: Brunswick  
Exam Level (circle one): RO

Date of Examination: 11/1/2004  
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. Shutdown HPCI, Auxiliary Oil Pump Fails to AUTO Start	D/A/S/L	4
b. Reenergize Trip Calibration Cabinet (CB-XU-63)	N/C	7
c. Restore RBHVAC with Failure to Isolate	D/A/S	9
d. Establish UAT Backfeed	D/S	6
e. Startup the Second Reactor Feed Pump per 2OP-32 – DFCS Control Signal Failure	D/A/S/L	2
f. Complete the Actions for a Complete Loss Of TBCCW per AOP-17.0	N/S	8
g. Recirculation Pump Start – Recirculation Pump Speed Control Failure	D/A/S	1
h. Vent Primary Containment via SBGT to Control Drywell Pressure per AOP-14	N/S	5

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

i. Bypass RWCU Filters per SEP-07	N/R	3
j. SBO Cross Tying 480V Buses – Breaker Charging Spring Failure	D/A/R	6
k. Control Room Evacuation per AOP-32, Placing RHR in Suppression Pool Cooling	D/R	5

\* 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>11/1/2004</u>	
Exam Level (circle one): SRO(I)	Operating Test No.: <u>1</u>	
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
a. Shutdown HPCI, Auxiliary Oil Pump Fails to AUTO Start	D/A/S/L	4
b. Reenergize Trip Calibration Cabinet (CB-XU-63)	N/C	7
c. Restore RBHVAC with Failure to Isolate	D/A/S	9
d. Establish UAT Backfeed	D/S	6
e. Startup the Second Reactor Feed Pump per 2OP-32 – DFCS Control Signal Failure	D/A/S/L	2
f. Complete the Actions for a Complete Loss Of TBCCW per AOP-17.0	N/S	8
g. Recirculation Pump Start – Recirculation Pump Speed Control Failure	D/A/S	1
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. Bypass RWCU Filters per SEP-07	N/R	3
j. SBO Cross Tying 480V Buses – Breaker Charging Spring Failure	D/A/R	6
* 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: Brunswick  
Exam Level (circle one): SRO(U)

Date of Examination: 11/1/2004  
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. Shutdown HPCI, Auxiliary Oil Pump Fails to AUTO Start	D/A/S/L	4
b. Reenergize Trip Calibration Cabinet (CB-XU-63)	N/C	7
c. Restore RBHVAC with Failure to Isolate	D/A/S	9

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

i. Bypass RWCU Filters per SEP-07	N/R	3
j. SBO Cross Tying 480V Buses – Breaker Charging Spring Failure	D/A/R	6

\* 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

FINAL

Facility: Brunswick		Date of Examination: 11/1/2004			Operating Test Number: 1-2004		
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).			CA	MP	TRC	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.			CA	MP	TRC	
c.	The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).			CA	MP	TRC	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.			CA	MP	TRC	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			CA	MP	TRC	
2. WALK-THROUGH				--	--	--	
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>			CA	MP	TRC	
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.			CA	MP	TRC	
c.	At least 20 percent of the JPMs on each test are new or significantly modified.			CA	MP	TRC	
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.			CA	MP	TRC	
		Printed Name / Signature		Date			
a.	Author	Curt Robert / Curt Robert		10/25/04			
b.	Facility Reviewer(*)	Marion A. Pearson / Marion A. Pearson		10/26/04			
c.	NRC Chief Examiner (#)	TeKolb / TeKolb / Raymond / [Signature]		10/28/04			
d.	NRC Supervisor	R. Arillo / [Signature]		10/28/04			
<p>NOTE: * The facility signature is not applicable for NRC-developed tests.                  # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.</p>							

Facility: Brunswick		Date of Exam: 11/1/04		Scenario Numbers: 1 / 2 / 4		Operating Test No.: 1-2004			
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.	ca	MSD	MSD	MSD	MSD	MSD		
2.	The scenarios consist mostly of related events.	ca	MSD	MSD	MSD	MSD	MSD		
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)	ca	MSD	MSD	MSD	MSD	MSD		
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.	ca	MSD	MSD	MSD	MSD	MSD		
5.	The events are valid with regard to physics and thermodynamics.	ca	MSD	MSD	MSD	MSD	MSD		
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	ca	MSD	MSD	MSD	MSD	MSD		
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.	ca	MSD	MSD	MSD	MSD	MSD		
8.	The simulator modeling is not altered.	ca	MSD	MSD	MSD	MSD	MSD		
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.	ca	MSD	MSD	MSD	MSD	MSD		
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.	ca	MSD	MSD	MSD	MSD	MSD		
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	ca	MSD	MSD	MSD	MSD	MSD		
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).	ca	MSD	MSD	MSD	MSD	MSD		
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	ca	MSD	MSD	MSD	MSD	MSD		
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d)		Actual Attributes		--	--	--	--		
1.	Total malfunctions (5-8)	9 / 10 / 8		ca	MSD	MSD	MSD		
2.	Malfunctions after EOP entry (1-2)	2 / 2 / 4		ca	MSD	MSD	MSD		
3.	Abnormal events (2-4)	4 / 4 / 3		ca	MSD	MSD	MSD		
4.	Major transients (1-2)	1 / 1 / 1		ca	MSD	MSD	MSD		
5.	EOPs entered/requiring substantive actions (1-2)	2 / 2 / 2		ca	MSD	MSD	MSD		
6.	EOP contingencies requiring substantive actions (0-2)	1 / 1 / 2		ca	MSD	MSD	MSD		
7.	Critical tasks (2-3)	4 / 3 / 3		ca	MSD	MSD	MSD		

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*	2	0	3A	0	<del>X</del>		2,5	0
	Normal	1*	0	1,2A	0	1			4	1
	Instrument / Component	4*	3,5	1A,4,5	2,3,4A	1A,4			2A,5,6	3,5A
	Major	1	6,7	6,7	5,6	5,6			7	7
As RO	Reactivity	1*	2		3A		<del>X</del>		2,5	
	Normal	0	0		0				4	
	Instrument / Component	2*	3,5		2,3,4A				2A,5,6	
	Major	1	6,7		5,6				7	
SRO-I	Reactivity	0	2		3A		<del>X</del>		2,5	
	Normal	1*	1,2A		1				1,4	
	Instrument / Component	2*	1A,3,4,5		1A,2,3,4,4A				2A,3,5,5A,6	
	Major	1	6,7		6,6				7	
SRO-U	Reactivity	0	2		3A		<del>X</del>		2,5	
	Normal	1*	1,2A		1				1,4	
	Instrument / Component	2*	1A,3,4,5		1A,2,3,4,4A				2A,3,5,5A,6	
	Major	1	6,7		5,6				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:

Curt Robert

NRC Reviewer:

[Signature]



Facility: BRUNSWICK STEAM ELECTRIC PLANT Date of Exam: 10/27/04 Exam Level: RO/SRO

Item Description	Initial		
	a	b*	c*
1. Questions and answers technically accurate and applicable to facility	CR	MAP	105
2. a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	CR	MAP	105
3. SRO questions are appropriate per Section D.2.d of ES-401	CR	MAP	105
4. Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process			105
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 checked="" type="checkbox"/> the examinations were developed independently; or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or other (explain)	CR	MAP	105
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	CR	MAP	105
	Bank	Modified	New
	15 / 5	12 / 0	48 / 20
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	CR	MAP	100
	Memory	C/A	
	34 / 8	41 / 17	
8. References/handouts provided do not give away answers	CR	MAP	105
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	CR	MAP	105
10. Question psychometric quality and format meet ES, Appendix B, guidelines	CR	MAP	105
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet	CR	MAP	105

	Printed Name / Signature	Date
a. Author	<u>Curt Robert / Curt Robert</u>	<u>10/14/04</u>
b. Facility Reviewer (*)	<u>Tony Pearson / Tony Pearson</u>	<u>10/27/04</u>
c. NRC Chief Examiner (#)	<u>RICHARD S. BALOWIN / Richard S. Balowin</u>	<u>10/26/04</u>
d. NRC Regional Supervisor	<u>MICHAEL E. EARLSTON / Michael E. Earlston</u>	<u>10/27/04</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.

Brunswick 2004-301

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	Backward	
<p>Instructions</p> <p>[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]</p> <ol style="list-style-type: none"> <li>Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.</li> <li>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).</li> <li>Check the appropriate box if a psychometric flaw is identified:                     <ul style="list-style-type: none"> <li>The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).</li> <li>The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).</li> <li>The answer choices are a collection of unrelated true/false statements.</li> <li>One or more distractors is not credible.</li> <li>One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).</li> </ul> </li> <li>Check the appropriate box if a job content error is identified:                     <ul style="list-style-type: none"> <li>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).</li> <li>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).</li> <li>The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).</li> <li>The question requires reverse logic or application compared to the job requirements.</li> </ul> </li> <li>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).</li> <li>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?</li> <li>At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).</li> </ol>											
RO/SRO Combined Question											





Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward				Q=K/A
3	F	2						X							<p>202002G2.1.2, NEW Change distractor "D" to read "Neither permission from the SRO nor concurrent verification is required." The double negative in "D" as written renders it NOT plausible. RFA 09/10/04</p> <p>Agree with comment <b>October 1, 2004</b> <u>Licensee did change as recommended.</u></p>
4	H	3						X							<p>203000A3.04 MODIFIED NRC Bold ALL the parameters that are different in each of the choices. <u>Licensee did</u> Distractor "B" is the same as "A" except that it states slightly less than 2300 gpm instead of 0. Distractor "D" could be arguably correct. RFA 09/10/04</p> <p><b>September 22, 2004</b> Agree with distractor B comment above. Needs to be changed Distractor D appears to be ok. <b>October 1, 2004</b> <u>Licensee changed the words to exact numbers.</u> <u>This left nothing to be interpreted.</u></p>
5	F	2													<p>203000K4.13 NEW No Comment RFA 09/10/04</p> <p><b>September 22, 2004</b> RSB agree</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A			SRO Only
6	H	2													<p>204000A1.09, NEW  Distractor "C" is NOT plausible given the "sudden marked increase" in the stem.  RFA 09/10/04</p> <p><b>September 22, 2004</b>  RSB agree with comment.  Additionally, not sure the question matches the KA</p> <p><b>October 1, 2004</b>  <u>Licensee changed out the question completely. Change appears to be ok.</u></p>
7	F	2													<p>205000K2.02 NEW  No Comment  RFA 09/10/04</p> <p><b>September 22, 2004</b>  RSB  IS this something that needs to know from memory?  Ask licensee.</p> <p><b>October 1, 2004</b>  <u>yes they need to know this information</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	# units	Backward	Q= K/A	SRO Only			
8	F	2											Y	N	E	206000A4.05 NEW This is a memory level question NOT C/A. RFA 09/10/04 <u>September 22, 2004</u> RSB agree with comment, not a CA question. <u>October 1, 2004</u> <u>Licensee disagrees with comment, agree with licensee after discussion.</u>
9	H	1											Y	N	E	206000K6.02 This question meets the KA, however, it has very low discriminatory value. RFA 09/10/04 <u>September 22, 2004</u> RSB agree with comment however, it is ok. <u>October 1, 2004</u> <u>Question is ok as is. No changes necessary.</u>
10	H	2											Y	N	S	209001A4.13 NEW No Comment RFA 09/10/04 <u>September 22, 2004</u> RSB Agree with 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				Backward
11	H	2				X							N	<p>211000A4.03 <u>October 1, 2004</u> RSB</p> <p>However, Distractor D. could also be an additional correct answer. Nothing precludes the operator from doing this.</p> <p>Discuss with licensee!</p> <p><u>October 1, 2004</u></p> <p><u>Added OP-5. Standby Liquid control in the stem to ensure no other answers were correct.</u></p>
12	F	2											Y	<p>212000G2.2.22 NEW</p> <p>No Comment</p> <p>RFA 09/10/04</p> <p><u>October 1, 2004</u> RSB Agree with comment.</p>
13	H	3	X										Y	<p>215001A2.02</p> <p>Stem: Place "the" between the words "describes" and "response." Reference a procedure with respect to "what operator action..."</p> <p>RFA 09/10/04</p> <p><u>October 1, 2004</u></p> <p>Would change "rises" to increases in the stem. Otherwise appears to be ok.</p> <p><u>October 1, 2004</u></p> <p><u>licensee made recommended changes.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
14	H	3											Y	N	E*	215003A1.05 NEW Note: Is it assumed that the mode switch is in Startup if a startup is commencing? Otherwise, a mode switch position should be stated. RFA 09/10/04  <b><u>October 1, 2004</u></b> RSB appears to be ok as is, not necessary to change.  <b><u>October 1, 2004</u></b> <b><u>Licensee agrees that it was not necessary to add this change. Did not change.</u></b>
15	H	2											Y	N	S	215004A3.02 No Comment RFA 09/10/04
16	F	2											Y	N	S	215005K2.02 No Comment RFA 09/10/04
17	F	2											Y	N	S	215005K5.04 No Comment RFA 09/10/04
18	H	2											Y	N	S	217000K3.04 No Comment RFA 09/10/04

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A			SRO Only	
19	H	3													218000K4.01 NEW Distractor "A" is NOT plausible. All red and green lights off is indicative of power removed, not movement of a switch position. Replace distractor "A" with something similar to distractor "D." RFA 09/10/04 <b><u>October 1, 2004</u></b> KA matches, Agree with distractor A analysis. This needs to be not so clear cut that it is wrong. <b><u>October 1, 2004</u></b> <b><u>Made changes to all the distractors, made them more concise. And fixed A.</u></b>	
20	F	2											Y	N	S	223001K4.06 No Comment RFA 09/10/04
21	F	2											Y	N	S	223002A1.04 No Comment RFA 09/10/04
22	H	2											Y	N	S	234000A3.02 No Comment RFA 09/10/04
23	F	2											Y	N	S	239002K2.01 No Comment RFA 09/10/04

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
24	H	2												<p>245000K3.02 NEW</p> <p>The choices are too similar. "Slightly higher" and "approximately the same" could arguably be non-differentiating. Modify all the choices accordingly.</p> <p><b><u>October 1, 2004</u></b></p> <p>Agree with above comments. What does approximately the same mean, can this be quantified?</p> <p>The stem of the question, first sentence is awkward, could be reworded to be clearer. Discuss with licensee.</p> <p>Unit 2 is at 23% power synchronizing to the grid, when a generator primary lockout occurred.</p> <p><b><u>October 1, 2004</u></b></p> <p><b><u>Made the distractors more precise, and reworded the first sentence, which makes it easier to read.</u></b></p>



Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minuta	#/units	Back-ward	Q=K/A		
25	H	2	X											<p>256000K2-01</p> <p>Restate the question as follows: Which one of the following is the correct condensate and condensate booster pump alignments to provide makeup to the reactor vessel? RFA 09/10/04</p> <p><b><u>October 1, 2004</u></b></p> <p>Which one of the following correctly describes the condensate and condensate booster pump alignment available for RPV makeup.</p> <p><b><u>October 1, 2004</u></b></p> <p><b><u>Changed the stem as requested and left in immediately. Change is ok.</u></b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
26	H	2											<p>259001K1.04 NEW</p> <p>The distractor analysis for distractors "C" and "D" seems to be incorrect. WRT the reference, it appears that the distractors "C" and "D" are still valid. RFA 09/10/04</p> <p><u>October 1, 2004</u></p> <p>Add the noun name for O-GP13.</p> <p>Why would anyone believe that Feedwater Heaters 4A/4B gravity drain to a previous heater. It seems that this would be fundamental knowledge and no one would choose either C or D.</p> <p>The C and D do not make sense from the stand point of Gravity drainage from See question.</p> <p><u>October 1, 2004</u></p> <p><i>removed the word GRAVITY, from the stem. However distractor c and d are plausible. Agree following licensee discussion. Ok as changed.</i></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
27	H	3														<p>259002A2.06 NEW  The distractors are NOT psychometrically balanced. Change "D" to "Remain at ....." or change "C" to automatically ....  RFA 09/10/04  <u>October 1, 2004</u>  RSB agree with above comment.  <u>October 1, 2004</u>  <u>changed distractor B to manual. Change is ok.</u></p>
28	F	2														<p>261000K4.03 NEW  <u>October 1, 2004</u>  Question appears to be ok.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A		
29	F	2											E	262001K1.02 NEW RFA 09/10/04 <u>October 1, 2004</u> RSB Is this something an operator is expected to know from memory. Do not understand the circuitry from information provided, have licensee explain. Discuss with licensee above request. <u>October 1, 2004</u> <b>Yes the operators need to know this. Question is strictly about control power. B has an ABT for control power where, C and D do not. So they have to manually transfer. OK as is.</b>
30	F	2										Y	N	S No Comment RFA 09/10/04
31	H	2										Y	N	S No Comment RFA 09/10/04
32	H	2										Y	N	S No Comment RFA 09/10/04

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia #/units	Backward	Q=K/A		
33	H	2										S	26400K1.06 No Comment RFA 09/10/04
34	F	2			X						Y	N	26400K6.01 BANK The reference states that failure to pressurize the overspeed pressure switch in 45 seconds will result in initiation of an engine lockout signal and subsequent trip. It further states that in an overspeed condition, the overspeed trip valve dumps "control" oil back to the engine sump causing the overspeed pressure switch to actuate and initiate an engine lockout. Therefore, I think distractors "C" and "D" are also indirectly correct. RFA 09/10/04  <u>October 1, 2004</u>  Can DG2 be tied to any other bus other than E2? If not, then this information is not necessary.  Agree with above comments. Discuss with licensee.  <u>October 1, 2004</u>  <u>Technically correct. OK as is. DG2 can be tied or not. Just stated that it was tied to not question if it is or not.</u>  <u>OK as is. No change necessary.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
35	H	2														<p>There is a question at the back of number 34 that is also designated as # 35. It has the same KA as the question in tab 35. Not sure which question is the appropriate question.</p> <p><u>October 1, 2004</u></p> <p><i><u>This question was taken off of the exam and inadvertently left in the book. The question was removed because of double jeopardy with other questions on the exam.</u></i></p>
36	H	2				X							Y	N	S	<p>288000K5.02 No Comment RFA 09/10/04</p> <p>290003K6.01 Modified MOI Bank</p> <p><u>October 1, 2004</u></p> <p>RSB</p> <p>Does MCC-2CB only supply the B fan? YES?</p> <p><u>October 1, 2004</u></p> <p><u>YES. it is.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward				Q=K/A
37	H	2													295001AK1.01 BANK LOI RFA 09/10/04 <u>October 1, 2004</u> Add noun name for AOP-15. Add the word between before 200". The question is designated as a CA but believe it is a memory level. If you do not know about the caution in the procedure, then you can not use the stem to answer the question. Need to change designation. <u>October 1, 2004</u> <i>Licensee could go either way but changed it to a fundamental knowledge question. Also added between as stated above.</i>

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		
38	F	1											<p>295002AK3.02 <u>BANK NRC</u></p> <p>This question meets the KA</p> <p>RFA 09/10/04</p> <p><u>October 1, 2004</u></p> <p>Distractors C and D could be shortened to remove The turbine is tripped on lowering condenser vacuum. Could start these sentences with the next words.</p> <p>Add to the stem the reason why!</p> <p><u>October 1, 2004</u></p> <p><u>Changed as requested. Makes it shorter and easier to read. OK as changed.</u></p>



Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward				Q=K/A	SRO Only
39	H	2						X							S	295003G2.1.28 BANK LOI <u>October 1, 2004</u> Add noun name to the stem for AOP - 36.1 What about distractor B how do you get a unit 2 local signal? This is not plausible. Distractor D, states the tie bus, would it be better if we used the tie breaker. <u>October 1, 2004</u> <u>Added noun name. Could get a LOCA on unit 2, how e buses interact. Did not change tie bus to tie breaker, but after discussion decided to change tie breaker as requested.</u>
40	H	2											Y	N	S	295004AA2.02 No Comment RFA 09/10/04
41	H	2											Y	N	S	295005AA2.08 No Comment RFA 09/10/04
42	H	2						X					Y	N	S	295006AA1.07 MOD LOI BANK <u>October 1, 2004</u> Appears to be ok as is.
43	F	2											Y	N	S	295009AK1.03 No Comment RFA 09/10/04

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
44	H	2											Y	N	S	295012G2.1.23 No Comment RFA 09/10/04
45	H	2											Y	N	E	295013AA2.01 This question is memory (F) NOT C/A. There is no calculation involved. RFA 09/10/04 <b><u>October 1, 2004</u></b> This question is a Memory level question.  Is an operator supposed to know this information without reference material. Ask licensee. Not sure this is testable and if a reference is provided it is a direct lookup in the references.  <b><u>October 1, 2004</u></b>  <b><u>Licensee agrees it is more a fundamental. Changed. Also should know because this is an entry condition for EOP.</u></b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws			5. Other	6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units				Backward	Q=K/A
46	H	2													295016AA2.06 RFA 09/10/04 <u>October 1, 2004</u> Add to the stem the noun name for AOP 31. This question appears to be ok. <u>October 1, 2004</u> <u>Added in the stem.</u>
47	H	2													295018G2.4.50 No Comment RFA 09/10/04
48	F	2													295019AK2.02 It is common knowledge that pneumatic valves fail either closed or open. Therefore distractor "A" is NOT plausible. <u>October 1, 2004</u> Agree with comment, need to change distractor A to a plausible one. <u>October 1, 2004</u> <u>Licensee states that BNP has PNEU valves that fail as is. CDD effluent valves to maintain flow have this feature.</u>
49	H	2													295020AK2.06 No Comment RFA 09/10/04

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A		
50	H	2	X											295021AA1.04 Underline "preferred" in the stem. RFA 09/10/04 <u>October 1, 2004</u> Agree with comment. <u>October 1, 2004</u> <b><u>DONE as requested.</u></b>
51	F	2												295023AA1.04 No Comment RFA 09/13/04

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
52	H	2	X										<p>295024EK3.01 BANK LOI Based on the reference, I cannot see why the redistribution of non condensibles is the reason why drywell sprays are initiated. Facility should re-evaluate. RFA 09/13/04</p> <p><b><u>October 1, 2004</u></b></p> <p>Why is distractor D considered to be correct. What is the design temperature of the drywell? This distractor is not plausible.</p> <p>Do we need to add the noun name for EOP 02, PCCP to the stem?</p> <p><b><u>October 1, 2004</u></b></p> <p><b><u>The licensee states that this is the reason for these set of conditions. Once &gt; SCSIP 95% of non condensibles are in the forus. Spray forces SC to DW VB operation and forces non condensibles back to the drywell. This precludes chugging DWT design temp is 300.</u></b></p> <p><b><u>OK as is after licensee discussion.</u></b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
53	H	2				X							295025EK1.01 NEW With a unit operating at power, "essentially no change in steam flow..." is NOT plausible under any circumstances. Rewrite distractors "A" and "C." RFA 09/13/04  <b><u>October 1, 2004</u></b> Agree with comment.  <b><u>October 1, 2004</u></b>  <b><u>Licensee proposed a new question to replace this question. The new question is ok.</u></b>
54	F	2											295026EK3.04 No Comment RFA 09/13/04
55	F	2											295028G2.2.25 No Comment RFA 09/13/04
56	F	2											295030EA1.05 No Comment RFA 09/13/04

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A		
57	H	2												<p>295031EA2.04  This question is good. However, it is NOT psychometrically balanced. Change "D" to read Jet pump suction, Change "A" to read Top of Active Fuel.  RFA 09/13/04  <b><u>October 1, 2004</u></b>  Agree with comment.  Change all the distractors to numbers to avoid any clue as to a particular level. That would fix the above concerns.  <b><u>October 1, 2004</u></b>  <b><u>Changed as requested, looks ok as changed.</u></b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward			Q=K/A
58	F	2	X										<p>295032EA1.01  3/4 of the stem can be removed and thus, the question simplified.  RFA 09/13/04  <b><u>October 1, 2004</u></b></p> <p>Agree there is a great deal of "window dressing" in the stem. The stem also provides a teaching aid in that for the indications the operator is told to assume a steam leak. This could be eliminated, and just state the actions that were taken.</p> <p>Discuss with licensee.  Could use the words "available at" vice "obtained from!"</p> <p><b><u>October 1, 2004</u></b></p> <p><b><u>Licensee modified the stem and cleaned up the stem. OK as changed.</u></b></p>	
													E	
														S



Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward				Q=K/A
59	H	2	X												<p>295037EK2.06 NEW 90% of the stem is NOT needed. Delete everything except the "Which one of the following ..." statement. After the change, it is clearly a memory (F) question. RFA 09/14/04</p> <p><b><u>October 1, 2004</u></b></p> <p>Agree there is a lot of "window dressing" in the stem. Agree this question is not a C/A because you do not have to use any of the stem to answer the question. There is nothing to have to calculate or figure out, you have to have had this memorized.</p> <p>Could change the stem to "Control rod insertion can be accomplished".</p> <p>Discuss with licensee.</p> <p><b><u>October 1, 2004</u></b></p> <p><b><u>Disagree with being fundamental, ok as a CA question. The licensee changed the stem, shortened it and removed the extra stuff. Added the procedure name. Will add can be accomplished in the stem to make it clearer.</u></b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
60	H	2											<p>295038EK2.01 NEW</p> <p>This question is NOT psychometrically balanced. Furthermore, it is not plausible for there to be no operator action(s) under these conditions especially since 3 of the choices require action. Replace distractor "A." RFA 09/14/04</p> <p><b><u>October 1, 2004</u></b></p> <p>Distractor A could be fixed if information about grab samples was added to it. Maybe this would help that distractor.</p> <p>In the stem could delete the work annunciator from the UA -03 2-8 alarm since it is in the stem previously.</p> <p><b><u>October 1, 2004</u></b></p> <p><b><u>Change was ok, however, needed some more work, the agreed upon wording will be ok.</u></b></p> <p><b><u>OK as changed.</u></b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A			SRO Only
61	F	2	X												<p>300000A2.01</p> <p>In "A" and "B" change "could" to "will."            In "C" and "D" bold or cap "not."            De-emphasize "only" in "C" and "D."            Add a procedure number following the word "actions" in the stem.            RFA 09/14/04</p> <p><u>October 1, 2004</u></p> <p>agree with the above comments.</p> <p>What is a "valve shift" failure? Discuss with licensee.</p> <p>Should valve shift be in ""?</p> <p><u>October 1, 2004</u></p> <p><u>Valve shift the way it is in the annunciator procedure. Ok as is then, did change also asked to put this statement in parenthesis to ensure the applicants know this is a quote from the procedure.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
62	H	2	X												E	<p>40000K1.04 MOD LOI BANK</p> <p>Since "B", "C", and "D" are all at lower pressure then RBCCW, stem information is moot and serves only as "window dressing."</p> <p>Re-draft the stem to simplify the question. After the change, it is clearly a memory (F) question.</p> <p>RFA 09/14/04</p> <p><u>October 1, 2004</u></p> <p>Discuss with licensee.</p> <p><u>October 1, 2004</u></p> <p><b><i>Need the information in the stem as written. Ok as is. Since you had to interpret the two alarms then it is a CA however low level. Ok as described as a CA question.</i></b></p>
															S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A			SRO Only
63	H	2											N	N	<p>50000EA2.02 NEW</p> <p>The KA is NOT met. The KA deals with the relationship between oxygen monitoring and high containment hydrogen concentrations. The question stem is focused on the bases for isolating the H2/O2 monitors on high drywell pressure.</p> <p>RFA 09/14/04</p> <p><u>October 1, 2004</u></p> <p>Agree with comment. Does not match the KA</p> <p><u>October 1, 2004</u></p> <p><u>Licensee agrees that the KA did not match. NRC provided a randomly generated KA from the same area. This question will be faxed. The fixed question is ok as changed.</u></p>
64	F	2											Y	N	<p>60000CAK1.01</p> <p>No Comment</p> <p>RFA 09/14/04</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
65	H	2	X												E	<p>60000AK3.04 MODIFIED LOI BANK Delete the first sentence in the stem. Add a procedure title after OASSD-02. This is clearly a memory (F) question. RFA 09/14/04</p> <p><u>October 1, 2004</u></p> <p>Could do as recommended above, however, not necessary. That is with deleting the first sentence.</p> <p>Do need to add the noun name for the procedure used.</p> <p>Change distractor A to look like D. Uncontrolled injection of RCIC in stead of what is there.</p> <p><u>October 1, 2004</u></p> <p><u>Licensee deleted the first sentence. And added the noun name. Changed C to match Delta. Ok as changed. And changed to F</u></p>
															S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units				Backward
66	F	2	X											<p>GRO2.1.23 The distractors are subject to interpretation and subjective personal opinion. Rewrite/replace the question to be more discrete. The procedure states that the decision must be made on a case by case basis. Furthermore, the procedure does NOT define what "special information is required" means. RFA 09/14/04</p> <p><u>October 1, 2004</u> Discuss with licensee about comment.</p> <p>Distractor D seems like some words are missing, like from 3 element or single element control.</p> <p><u>October 1, 2004</u> <i>Changed the question because of ambiguity. The new question will require a reference. Changed the Tank Volume title to just Measured Air Gap. Also struck the teaching part of the stem that stated that tank volume is the measured distance from the surface of the liquid top of the tank. This makes this a CA question.</i></p>
67	F	2	X											<p>GRO2.1.3 <u>Emphasize</u> the word "minimum" in the stem. RFA 09/14/04</p> <p><u>October 1, 2004</u> <u>DID as requested.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units				Back-ward
68	F	2											S	GRO2.2.30 No Comment RFA 09/14/04
69	F	2											S	GRO2.2.4 No Comment RFA 09/14/04
70	F	2	X										E	GRO2.3.10 Change the stem word "reason" to bases. This will ensure that "D" is eliminated as a possible correct answer. RFA 09/14/04
71	H	2				X							S	<u>October 1, 2004</u> <u>Changed reason to basis, as requested.</u>
													E	GRO2.3.2 The word "following" is missing from the stem. The distractors are not balanced. Change "C" or "D" to "NOT meet...however..." RFA 09/14/04
													S	<u>October 1, 2004</u> Agree with above, Distractor C is missing a "to" after and before valves in the last sentence. Make either C or D a NOT answer as above. <u>October 1, 2004</u> <u>changed as requested. Ok as changed.</u>



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
72	H	2	X											E	GRO2.3.4 The word "a" is missing from the stem after the word "received." RFA 09/14/04 <u>October 1, 2004</u> Agree <u>October 1, 2004</u> <u>changed as requested.</u>
73	F	2				X								S	GRO2.4.13 Distractors "C" and "D" are NOT plausible. It is common knowledge that immediate actions must be performed from memory. Re-write distractors "C" and "D." RFA 09/14/04 <u>October 1, 2004</u> Agree with comment. <u>October 1, 2004</u> <u>Replaced question, the replacement is going to be worked on and have RVCP entry condition, then the answer would change to D. The replacement question is ok.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward			Q=K/A	SRO Only
74	F	2				X						Y	N	U	GRO2.4.15 The question, as is, is NOT discriminatory. Change the question to a positive as follows: Which one of the following should be communicated during the brief? A. Status of fire, EAL classifications, and orders to the FB. B. Status of fire, status of evacuations, and orders to the FB. C. EAL classifications, status of evacuations, and orders to the FB. D. Status of fire, EAL classifications, and status of evacuations. RFA 09/14/04 <u>October 1, 2004</u> Recommended changes are ok. <u>October 1, 2004</u> <b><u>OK change, accepted our recommendations.</u></b>
														S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
75	F	2														GRO2.4.34 RFA 09/14/04 <u>October 1, 2004</u> Believe it is ok as is. However, the distractors could use some commas prior to the word that in each one. <u>October 1, 2004</u> <u>OK as changed.</u>

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
<b>SRO ONLY</b>														
1	F	2												<p>G2.1.11, MEM 3.0/3.8, New TCK 8/26/04 <u>October 1, 2004</u></p> <p>Place the word immediately in front of manually. <u>October 1, 2004</u></p> <p><u>Comment accepted. Ok as changed.</u></p>
2	H	4												<p>G2.1.7, C/A 3.7/4.4, New TCK 8/26/04</p> <p>Technically no correct answer as written.</p> <p>Need to change correct answer to 'probability of an instability event' to make it correct.</p> <p>Reword stem question to remove 'correct operational judgement' and replace with 'determination'.</p> <p><u>October 1, 2004</u></p> <p>Do we need to define CO DSR, (for NRC a least)? Agree with above comments.</p> <p><u>October 1, 2004</u></p> <p><u>Question was changed as requested. Change is ok.</u></p>
3	F	2												<p>G2.2.17, MEM 2.3/3.5, New TCK 8/26/04 No comment.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
4	F	2											<p>G2.3.3, MEM 1.8/2.9, Modified TCK 8/26/04            Question does not meet criteria for being modified.</p> <p>Also, the task is performed by Security. Although Operations coordinates the activities it is still not their job to disable the alarms.</p> <p><u>October 1, 2004</u></p> <p>Not sure when you would dispatch Operations Personnel as in Distractor B, this does not seem a credible distractor. Need to send EP personnel, electricians who ever works on those sirens.</p> <p>MEE</p> <p>DO not think that this question matches the KA. Sirens are not an auxiliary system, the KA speaks to waste disposal.....</p> <p><u>October 1, 2004</u></p> <p><u>The question was replaced with a refueling question that meets the KA. Question is ok.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward		
5	H	3											<p>G2.3.9, C/A 2.5/3.4, New  <b>TCK 8/26/04</b> First sentence is a run-on. May want to put question in bullet form.  <u>October 1, 2004</u>            Agree with the above comment.            OK as is not change is necessary.  <u>October 1, 2004</u>  <b>Question was modified to read easier with the use of periods.</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A			SRO Only
6	H	2				X							Y	Y	<p>G2.4.21, C/A 3.7/4.3, Bank TCK 8/26/04</p> <p>Distractor C or D needs to be replaced. If D would be the correct answer then C would also be correct. This allows the student to eliminate these possibilities without knowing the answer.</p> <p><b><u>October 1, 2004</u></b></p> <p>Distractor D states Hot shutdown boron weight, is there such a thing?? If not, then this distractor may not be credible. The reference material defines cold shutdown boron weight (CSBW).</p> <p>The reference material states that CSBW is 0% in the SLC tank or 6080 pounds. Distractor C states the entire SLC tank has been injected. Is this different?</p> <p><b><u>October 1, 2004</u></b></p> <p><b><u>Replaced question, replacement meets the KA and is considered to be ok.</u></b></p>
															S

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
7	F	3				X							Y	Y	E	<p>G2.4.28, MEM 2.3/3.3, New TCK 8/27/04</p> <p>Recommend revising distractor B since this function is never performed by this individual.</p> <p><u>October 1, 2004</u></p> <p>Change distractor B to read, The UNIT SCO shall require Engineering to perform an evaluation of the known plant conditions concerning the safe operation of the plant.</p> <p><u>October 1, 2004</u></p> <p><u>Changed distractors as requested and modified slightly. Question as written is ok.</u></p>
8	H	2											Y	Y	S	<p>G2.4.30, C/A 2.2/3.6, New TCK 8/27/04</p> <p><u>October 1, 2004</u></p> <p>OK as is.</p>



Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward			Q=K/A	SRO Only
9	H	2		X								Y	Y	E	G2.1.33, C/A 3.4/4.0, New TCK 8/27/04 Revise stem to say 'The SCO shall:' For distractor 'C' remove 'Operable' and replace with 'functioning properly'. <u>October 1, 2004</u> Agree with above comments. <u>October 1, 2004</u> <u>Changed question as requested. Change is ok.</u>
10	H	3										Y	Y	S	215002A2.05, C/A 3.2/3.3, New TCK 8/27/03 Revise stem from '114.1%' to '114.5%'. This is still within the allowable value but above the trip setpoint which makes distractor 'D' more plausible. Distractor analysis for 'D' should say that it is enforcing the LTSP. <u>October 1, 2004</u> Agree with 114.5 comment. Since this question discusses the use of TS and operability, believe this question is ok even though it does not have a 43 reference. Discuss with BC and Team lead. <u>October 1, 2004</u> <u>The licensee explained why this question was ok as written. After this discussion, the NRC agrees with the licensee.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units				Backward
11	H	3												219000A2-05, C/A 3.3/3.5, New <b>TCK 8/27/04</b> Suggest adding 'Tech Spec' in front of 'shutdown statement' in the stem. <b><u>October 1, 2004</u></b> Agree with above comment to add TS in stem. The question is written at the SRO level. Believe it should remain on the exam.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units				Backward
12	F	2	X											<p>262001G2.2.25, MEM 2.5/3.7, New TCK 8/27/04</p> <p>Remove first sentence since this is teaching in the stem. Suggest bolding the words 'preferred' and 'alternate' in the stem and choices to better delineate each transformer.</p> <p><u>October 1, 2004</u></p> <p>Agree with the above comments. Use underlines or bolding to highlight the proper descriptor.</p> <p><u>NOT sure because this is linked to TS that it is an SRO ONLY question. Why do RO's not need to know this? Discuss with licensee.</u></p> <p><u>October 1, 2004</u></p> <p><u>The licensee states the RO's need to know the offsite sources but do not need to know how they are defined in TS's. This depends on the status of the plant. After discussion with the licensee, understand why this question is an SRO only question. OK as is.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward			Q=K/A	SRO Only
13	F	2										Y	Y	E	264000G2.4.22, MEM 3.0/4.0, New <b>TCK 8/27/04</b> Change 'E2' in stem to 'its associated emergency bus'. This prevents teaching in the stem. Suggest revising distractor 'B' from drywell coolers to RBCCW pumps to prevent eliminating 2 answers if they know drywell coolers is not the answer. <u>October 1, 2004</u> Agree with above comments. <u>October 1, 2004</u> <u>Licensee made requested changes. Question is ok as changed.</u>
														S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A			SRO Only	
14	H	2											Y	Y	E	295007AA2.03, C/A 3.7/3.7, New <b>TCK 8/27/04</b> Remove SRV statement in stem to prevent teaching. Replace comma after breaker with 'and remove 'are'. Change distractor 'D' to 'Cycle SRV's as necessary to stabilize pressure. <u>October 1, 2004</u> Agree with above comments. Is this knowledge that is required to be known without a procedure? Ask licensee <u>October 1, 2004</u> <u>Changed as requested, this is required knowledge with out a procedure. Ok as changed.</u>
15	H	2											Y	Y	S	295016G2.1.32, C/A 3.4/3.8, Bank <b>TCK 8/27/04</b> 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	Backward	Q=K/A	SRO Only			
16	H	3											Y	Y	U	295018G2.4.30, C/A 2.2/3.6, New <b>TCK 8/27/04</b> Reword or break-up the first sentence in the stem. Difficult to read. Question is a direct look-up since all of the distractors specify which paragraph to look at.  Suggest making distractors say 'reportable per 10 CFR50.72 within 1 hr', 4hrs, and 8 hrs. Remove 'immediate' in stem since no notifications are immediate.  <b><u>October 1, 2004</u></b>  The initial conditions are very difficult to read. These need to be put in an easier form to read.  Agree it is a direct look up. Could change the distractors to have B C and D have within 1 hour, within 4 hours and within 8 hours. Replacing the 10CFR reference as stated above.  However, with the procedure this could still be considered a direct look up.  Discuss with licensee  <b><u>October 1, 2004</u></b>  <b><u>Changes were made as requested. Question is ok as changed.</u></b>
17	H	3											Y	Y	S	295021AA2.03, C/A 3.5/3.5, New <b>TCK 8/27/04</b> 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	Backward	Q=K/A			SRO Only
18	F	3										Y	Y	S	295024G2.2.22, MEM 3.4/4.1, New TCK 8/27/04 No comment.
19	F	2										N	Y	U	295025G2.4.6, MEM 3.1/4.0, New TCK 8/27/04 Question does not test mitigation strategies but why a number was changed due to power uprate. Could be fixed if question revised to test reason why pressure is lowered to 950 psig. <u>October 1, 2004</u> Agree with above comments. <u>October 1, 2004</u> <u>Changed the question to a modified one, the modified question appears to be ok.</u>
20	H	3										Y	Y	S	295029EA2.02, C/A 3.5/3.6, New TCK 8/27/04 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	Backward			Q=K/A
21	H	3				X						Y	Y	<p>295030EA2.01, C/A 4.1/4.2, Bank  <b>TCK 8/27/04</b></p> <p>Revise distractor 'D' to say 'Cycle SRV's in sequence" to eliminate possibility of interpreting this to mean 7 ADS valves.</p> <p>Distractor 'C' could also be a correct answer since EOP allows anticipation of slowdown.  Need to verify with utility to ensure I am interpreting the words right.</p> <p><b><u>October 1, 2004</u></b></p> <p>Agree with above comments.</p> <p>Discuss with licensee the possibility of C being an additional correct answer.</p> <p><b><u>October 1, 2004</u></b></p> <p><b><u>Licensee made the above changes, distractors c and d were modified. Question is ok as changed.</u></b></p>



Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units				Back-ward
22	H	3	X	X										<p>295031EA2.01, C/A 4.6/4.6, Bank</p> <p><b>TCK 8/27/04</b>            Need to add bullet for temperature on Reactor Building 50' as less than 140 degrees since this information is required for N026S/B instruments.</p> <p>Add 'area' to bullet such that it reads 'Drywell ref leg area temp'.  <u><b>October 1, 2004</b></u></p> <p>Agree with comments but do not believe this should have been evaluated as a U.  <u><b>October 1, 2004</b></u>  <b><u>Made recommended changes.</u></b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minuta	#/units	Backward				Q=K/A	SRO Only
23	H	2											Y	Y	E	295034EA2.01, C/A 3.8/4.2, Bank <b>TCK 8/27/04</b> Remove extra 'of' in stem. The question only asks what the correct action is. This makes distractor 'B' and 'D' correct. Need to also ask for the reason the action is correct.  Add to stem after required "and the basis for this action."  <u>October 1, 2004</u>  Agree with comments, add noun name for SEP-04, There are reasons for A, B and D, but there is no reason for C. Need to add a reason to C.  Do not believe it is a U.  <u>October 1, 2004</u>  <u>Added reason for C ok as changed.</u>
24	H	2											Y	Y	S	295035G2.4.4, C/A 4.0/4.3, New <b>TCK 8/27/04</b> No comment.
25	H	2											Y	Y	S	295037EA2.02, C/A 4.1/4.2, Bank <b>TCK 8/27/04</b> No comment.

Facility: Brunswick Nuclear Plant		Date of Exam: 10/29/2004		Exam Level: <u>RO &amp; SRO</u>	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	TK	N/A	kb		
2. Answer key changes and question deletions justified and documented	TK	N/A	kb		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	TK	N/A	kb		
4. Grading for all borderline cases (80 +/- 2% overall and 70 +/- 4% on the SRO-only) reviewed in detail	TK	N/A	kb		
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	TK	N/A	kb		
	Printed Name / Signature		Date		
a. Grader	<u>T.C. Kolb / </u>		<u>11-16-04</u> <del>10-16-04</del> TK		
b. Facility Reviewer(*)	<u>N/A</u>		<u>N/A</u>		
c. NRC Chief Examiner (*)	<u> (Richard A. Bell)</u>		<u>12/1/04</u>		
d. NRC Supervisor (*)	<u></u>		<u>12-1-04</u>		
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

BRUNSWICK NUCLEAR PLANT		Exam Date: November 1, 2004
Task Description	Date Complete	
1. Facility written exam comments or graded exams received and verified complete	12/01/04	
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	NA	
3. Operating tests graded by NRC examiners	12/02/04	
4. NRC Chief examiner review of written exam and operating test grading completed	12/02/04	
5. Responsible supervisor review completed	12/03/04	
6. Management (licensing official) review completed	12/07/04	
7. License and denial letters mailed	12-7-2004	
8. Facility notified of results	12-7-2004	
9. Examination report issued (refer to NRC MC 0612)	12-16-2004	
10. Reference material returned after final resolution of any appeals	NA	

**Progress Energy**  
**Brunswick Nuclear Plant**

Curt Robert  
Progress Energy  
P.O. Box 10429  
Southport, NC 28481-0429

May 20, 2004

NRC Chief Examiner Richard Baldwin


Dear Rick:

Attached to this cover letter is the Brunswick Plant's written examination outline developed by Curt Robert, authorized facility representative assigned to develop Brunswick Plant's NRC exam scheduled to be administered in November of 2004. The written examination outline was developed using the sampling process outlined in Attachment 1 of ES-401 of NUREG-1021, Draft Revision 9. The following K/A statements were pre-screened and eliminated from the sampling process as they were inappropriate for Brunswick:

295027 High Containment Temperature – Applies to Mark III containment ONLY  
295011 High Containment Temperature – Applies to Mark III containment ONLY  
207000 Isolation (Emergency) Condenser  
209002 HPCS  
201004 RSCS  
201005 RCIS  
239003 MSIV Leakage Control

I have reviewed the examination outline for quality per ES-201 and have attached Examination Outline Quality Checklist Form ES-201-2 to document this review.

Sincerely,



Curt Robert  
Senior Nuclear Operations Training Instructor  
Progress Energy – Brunswick Nuclear Plant



Progress Energy  
P. O. Box 10429  
Southport, NC 28461-0429

July 27, 2004

NRC Chief Examiner Richard Baldwin

Dear Mr. Baldwin:

This is the final proposed written examination and supporting reference materials identified in Attachment 2 of ES-201 for the Brunswick Nuclear Plant (BNP). This exam has been developed by Curt Robert from the previously submitted examination outline. Tony Pearson, an authorized BNP representative, has approved this examination for final submittal and it is understood by BNP personnel involved with examination development that there will be no changes made from this point on unless authorized by the NRC Chief Examiner, Richard Baldwin. The exam is scheduled to be administered October 29, 2004 and the agreed due date for this submittal is September 17, 2004. Operating test outlines will be submitted by August 18, 2004 and final Operating Test submittal materials will be submitted by September 17, 2004.

Sincerely,

A handwritten signature in black ink that reads 'Tony Pearson'.

Tony Pearson  
Supervisor Licensed Operator Requalification Training  
Progress Energy – Brunswick Nuclear Plant

TP/CR/dd  
Encls.

Progress Energy Carolinas, Inc.  
Brunswick Nuclear Plant  
P.O. Box 10429  
Southport, NC 28461



Progress Energy  
P. O. Box 10429  
Southport, NC 28461-0429

September 15, 2004

NRC Chief Examiner Richard Baldwin

Dear Mr. Baldwin:

This is the final proposed operating examination and supporting reference materials identified in Attachment 2 of ES-201 for the Brunswick Nuclear Plant (BNP). This exam has been developed by Curt Robert from the examination outlines that were submitted August 18, 2004. Tony Pearson, an authorized BNP representative, has approved this examination for final submittal and it is understood by BNP personnel involved with examination development that there will be no changes made from this point on unless authorized by the NRC Chief Examiner, Richard Baldwin. The exam is scheduled to be administered October 29, 2004 and the agreed due date for this submittal is September 17, 2004.

Sincerely,

A handwritten signature in black ink that reads 'Tony Pearson'.

Tony Pearson  
Supervisor Licensed Operator Requalification Training  
Progress Energy – Brunswick Nuclear Plant

TP/CR/dd  
Encls.

## Changes made to outlines

1. 8/25/04 – Chief examiner questioned whether the proposed JPM for SRO Radiation Control matched NUREG-1021 criteria. Upon review of NUREG-1021 Curt Robert and Rick Baldwin both agreed that this JPM did not meet Radiation Control criteria. Curt Robert proposed a modified JPM to Evaluate Liquid Discharge Release Permit and Rick Baldwin approved the change.
2. Changed NRC 2004-2 Event 2 component/instrument malfunction of LPRM failure to RHR Suction Strainer plugging. Scenario validation revealed that the LPRM malfunction provided little basis for evaluating the operator's competence in that it required no operator action beyond acknowledgement of an alarm and bypassing the LPRM.