

# COVER SHEET

**BROWNS FERRY EXAM  
50-259, 260, 296/2001-301**

**SEPTEMBER 17-21, 2001**

## **-- ADMINISTRATIVE DOCUMENTS -- ALL IN ONE ADAMS DOCUMENT**

- [ ✓ ] ES-201-1 - Exam Preparation Checklist
- [ ✓ ] ES-201-2 - Exam Outline Quality Checklist
- [ ✓ ] ES-201-3 - Exam Security Agreements
- [ ✓ ] ES-301-1 - Admin Topics Outline
- [ ✓ ] ES-301-2 - Control Room Systems & Facility  
Walk-through Test Outline
- [ ✓ ] ES-301-3 - Operating Test Quality Checklist
- [ ✓ ] ES-301-4 - Simulator Scenario Quality Checklist
- [ ✓ ] ES-301-5 - Transient & Event Checklist
- [ ✓ ] ES-301-6 - Competencies Checklist
- [ ✓ ] ES-401-7 - Written Exam Quality Checklist
- [ ✓ ] ES-401-9 - Written Exam Review Worksheet
- [ ✓ ] ES-403-1 - Written Exam Grading Quality Checklist
- [ ✓ ] ES-501-1 - Post Exam Check Sheet

Facility: BROWNS FERRY NUCLEAR PLANTDate of Examination: 9/17-21/01Examinations Developed by: Facility / NRC (circle one)

Target Date*	Task Description / Reference	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	LSM
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	LSM
-120	3. Facility contact briefed on security & other requirements (C.2.c)	LSM
-120	4. Corporate notification letter sent (C.2.d)	LSM
[-90]	[5. Reference material due (C.1.e; C.3.c)]	NA
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	LSM
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	LSM
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	NA
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	LSM
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	LSM
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	LSM
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	LSM
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	LSM
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	LSM
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	LSM
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	LSM

\* Target dates are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.

[ ] Applies only to examinations prepared by the NRC.

Facility: Browns Ferry Nuclear Plant		Date of Examination: September 17-21, 2001		
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.	fm		100b
	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.	fm		100
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	fm		100
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	fm		
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.	fm		fm
	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.	fm		fm
	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.	fm		fm
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.	fm		fm
	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.	fm		fm
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	fm		fm
	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.	fm		fm
	e. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	fm		fm
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.	fm		fm
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	fm		fm
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	fm		fm
	d. Check for duplication and overlap among exam sections.	fm		fm
	e. Check the entire exam for balance of coverage.	fm		fm
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	fm		fm
a. Author		Printed Name / Signature Larry S. Mellen/ <i>[Signature]</i> Gerard Laska/ <i>[Signature]</i>		Date 9/13/01
b. Facility Reviewer (*)		NA		
c. NRC Chief Examiner (#)		Larry S. Mellen/ <i>[Signature]</i> / RICHARD S. BACH/ <i>[Signature]</i>		9/13/2001 / 9/13/01
d. NRC Supervisor		Michael E. Ernstes/ <i>[Signature]</i>		9/13/01
Note: * Not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.				

ES-201

Examination Security Agreement

Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 9/17/01 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 9/17/01. 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. John Parshall	H&T Lead Instructor	John Parshall	8/13/01	John Parshall	9-21-01	
2. R.W. Moore	DPS US	R.W. Moore	8/13/01	R.W. Moore	9-24-01	
3. Melissa Green	Training Materials Coordinator	Melissa Green	8/13/01	Melissa Green	10/3/01	
4. Randy Knight	OPS TRNG INSTRUCTOR	Randy Knight	8/13/01	Randy Knight	9-21-01	
5. Rhonda Durham	Ops Trng Clerk	Rhonda L. Durham	8/28/01	Rhonda L. Durham	9-21-01	
6. Dennis Wilson	OPS	Dennis Wilson	8-31-01	Dennis Wilson	9-24-01	
7. J. Kelly Rame	OPS	J. Kelly Rame	9-5-01	J. Kelly Rame	9-24-01	
8. T.S. Albright	Simulator Svs. Manager	Thomas Albright	9-6-01	Thomas Albright	9/21/01	
9. Van N. Miller	Simulator Svs. Engineer	Van N. Miller	9-6-01	Van N. Miller	9/21/01	
10. Patrick McQuinn	ops support supervisor	Patrick McQuinn	9-6-01	Patrick McQuinn	9/21/01	
11. Davis M. Olive	Operations Superintendent	Davis M. Olive	9-6-01	Davis M. Olive	9/21/01	
12. Robert H. McDowall	H&T INST	Robert H. McDowall	9-7-01	Robert H. McDowall	9/24/01	
13. Pat J. Arundel	H&T INST	Pat J. Arundel	9-7-01	Pat J. Arundel	9/21/01	
14. James C. Hall	Simulator Svs Eng	James C. Hall	9-12-01	James C. Hall	9/21/01	
15. James C. Hall	ops Trng Instructor	James C. Hall	9-12-01	James C. Hall	9/21/01	

NOTES:

ES-201

Examination Security Agreement

Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 9/17/01 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 9-17-01. 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.	RAYMOND C SCHARFF	INSTRUCTOR	Raymond C Scharff	9/12/01	Raymond C Scharff	9/12/01	
2.	Kenneth F. Hannah	NRC	Kenneth F. Hannah	9/12/01	Kenneth F. Hannah	9/12/01	
3.	Ronald L. Roberts	Endcon	Ronald L. Roberts	9-17-01	per telecon	9/29/01	
4.	TERRY L. CHINN	Operations Training Mgr	Terry L. Chinn	9/17/01	Terry L. Chinn	9/21/01	
5.	JOSEPH H. PUCKETT	MAINT INSTRUCTOR	Joseph H. Puckett	9/19/01	Joseph H. Puckett	9/24/01	
6.	JAMES WALLACE R	SIDE LICENSING ENG	James Wallace R	9/21/01	James Wallace R	9/21/01	
7.							
8.							
* 9.	Van N Miller	Sim Services Eng	see shft 1 line 9		Thomas L. Albright	10/4/01	per telecon
10.							
11.							
** 12.	Phillip C. Chadwell	Ops Support Sup.	see sheet 2 line 10		Phillip C. Chadwell	10/4/01	
13.							
14.							
15.							

NOTES:

\* Van is on sick leave his sup. discussed ES201-3 with him and signed  
 \*\* Phil signed the wrong line on sheet one and is signing new entry.

Facility: Browns FerryDate of Examination: 9/17-9/19 2001Examination Level (circle one): RO / SROOperating Test Number: 1

Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	QUESTION ON FITNESS FOR DUTY. (K/A 2.1.6, 4.3)
		DETERMINE THE CONDITION CLASSIFICATION FOR RCIC INOPERABLE. (K/A 2.1.33, 3.4/4.0)
	Shift Staffing Requirements	SRO - NRC-JPM-02 (NEW), EVALUATE OVERTIME ELIGIBILITY (K/A 2.1.3, 3.0/3.4)
A.2	Equipment Operability Requirements	SRO - JPM A.2 DETERMINE COMPONENT POSITIONS FOR VALVE LINE-UPS AND TAG ORDER PERFORMANCE. (K/A 2.2.1, 3.6/3.8)
A.3	Control of Radiation Releases	DETERMINE BUILDING VENTILATION NOBLE GAS RELEASE RATE. <b>JPM #131</b> , (KA 271000A4.05, 3.2/3.9)
A.4	Emergency Plan	JPM -181 CLASSIFY THE EVENT PER THE REP (GASEOUS RELEASE RATE-OSI-4.8.B.1.A.1) (K/A 2.4.38, 4.0)

Facility: Browns FerryDate of Examination: 9/17-9/19-2001Examination Level (circle one): RO / SROOperating Test Number: 1

Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct Of Operations	RO-JPM NRC  A.1.a DETERMINE REACTOR VESSEL WATER LEVEL.  (K/A 2.1.28)
	Shift Staffing Requirements	RO - NRC-JPM-02 (NEW),  EVALUATE OVERTIME ELIGIBILITY (K/A 2.1.3, 3.0/3.4)
A.2	Equipment Operability Requirements	RO - JPM A.2  DETERMINE COMPONENT POSITIONS FOR VALVE LINE-UPS AND TAG ORDER PERFORMANCE. (K/A 2.2.1, 3.6/3.8)
A.3	Control of Radiation Releases	DETERMINE BUILDING VENTILATION NOBLE GAS RELEASE RATE. <u>JPM #131</u> , KA 271000A4.05, 3.2/3.9
A.4	Emergency Plan	1. RO QUESTION: KNOWLEDGE OF ABNORMAL CONDITION PROCEDURES.( K/A: G2.4.11)
		2. RO QUESTION: KNOWLEDGE OF THE RO'S RESPONSIBILITIES IN EMERGENCY PLAN IMPLEMENTATION. (K/A G2.4.39)

Facility: Browns FerryDate of Examination: 9/17-9/19 2001Exam Level (circle one): RO / SRO(I) / SRO(U)Operating Test No.: 1**B.1 Control Room Systems**

System / JPM Title	Type Code*	Safety Function
a. CROSSTIE CAD TRAINS A AND B TO DRYWELL CONTROL AIR IN ACCORDANCE WITH 2-EOI APPENDIX 8G. (191F).	M,A,C	3
b. 2-EOI APPENDIX 12- PRIMARY CONTAINMENT VENTING FROM DRYWELL THROUGH FCV-84-20 (51F-MOD).	M,A,S	9
c. START A RECIRC PUMP DURING POWER OPERATION.(JPM 90).	D,S	1
d. N/A		
e. N/A		
f. N/A		
g. N/A		

**B.2 Facility Walk-Through**

a. 2/3-SSI-2-1 ATTACHMENT 1, SECTION 1.0, UNIT 2 REACTOR BUILDING FIRE. (16TC).	D	8
b. LINE UP ALTERNATE RPV INJECTION SYSTEM - FIRE SYSTEM IN ACCORDANCE WITH 2-EOI APPENDIX 7K (27F)	D,R	2
c. N/A		

\* 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: Browns Ferry  
Exam Level (circle one): **RO** / SRO(I) / SRO(U)

Date of Examination: 9/17-9/19 2001  
Operating Test No.: 1

### B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. CROSSTIE CAD TRAINS A AND B TO DRYWELL CONTROL AIR IN ACCORDANCE WITH 2-EOI APPENDIX 8G. (191F)	M,A,C	3
b. 2-EOI APPENDIX 12- PRIMARY CONTAINMENT VENTING FROM DRYWELL THROUGH FCV-84-20 (51F-MOD).	M,A,S	9
c. START A RECIRC PUMP DURING POWER OPERATION.(JPM 90).	D,S	1
d. PERFORM CONTROL ROOM ACTIONS REQUIRED TO ESTABLISH THE CONDENSATE/FEEDWATER SYSTEM AS AN RPV INJECTION SYSTEM. (14).	D,S	2
e. OPERATE RHR SYSTEM IN SUPPRESSION POOL COOLING MODE IN ACCORDANCE WITH 2-EOI APPENDIX 17A. (69)	M,S	5
f. RESPOND TO CONTROL ROD DRIFT IN. (80F MODIFIED)	M,A,S	7
g. LINE UP INJECTION SYSTEMS - RCIC IN ACCORDANCE WITH EOI APPENDIX 5C (18 modified).	M,A,S	4

### B.2 Facility Walk-Through

a. 2/3-SSI-2-1 ATTACHMENT 1, SECTION 1.0, UNIT 2 REACTOR BUILDING FIRE. (16TC).	D	8
b. LINE UP ALTERNATE RPV INJECTION SYSTEM - FIRE SYSTEM IN ACCORDANCE WITH 2-EOI APPENDIX 7K (27F)	D,R	2
c. JPM NRC-2 FILL AND VENT THE STATOR COOLING SYSTEM 2-O1-35A	N	4

\* 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: Browns Ferry Nuclear Plant		Date of Examination: September 17-20, 2001 Operating Test Number: 1		
1. GENERAL CRITERIA		Initials		
		a	b*	c#
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	[Signature]		[Signature]
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	[Signature]		[Signature]
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	[Signature]		[Signature]
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	[Signature]		[Signature]
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	[Signature]		[Signature]
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>	[Signature]		[Signature]
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	[Signature]		[Signature]
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.	[Signature]		[Signature]
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	[Signature]		[Signature]
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.	[Signature]		[Signature]
<div style="display: flex; justify-content: space-between;"> <div> <p style="margin: 0;">Printed Name / Signature</p> <p style="margin: 0;">Date</p> </div> </div>				
a. Author	Gerard Laska / <u>[Signature]</u>	9-12-2001		
b. Facility Reviewer(*)	NA			
c. NRC Chief Examiner (#)	Larry S. Mellen / <u>[Signature]</u>	9/13/2001		
d. NRC Supervisor	Michael E. Ernest / <u>[Signature]</u>	9/13/01		
<p>NOTE: * The facility signature is not applicable for NRC-developed tests.</p> <p># Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.</p>				

Facility:		Date of Exam:		Scenario Numbers: / /		Operating Test No.:	
QUALITATIVE ATTRIBUTES				Initials			
				a	b*	c#	
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.				N/A	for	
2.	The scenarios consist mostly of related events.					for	
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)					for	
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.					for	
5.	The events are valid with regard to physics and thermodynamics.					for	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.					for	
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.			N/A		N/A for	
8.	The simulator modeling is not altered.					for	
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.					for	
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.					for	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).					for	
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).					for	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.					for	
<b>TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)</b>				<b>Actual Attributes</b>			
1.	Total malfunctions (5-8)			4 / 5 /		N/A for	
2.	Malfunctions after EOP entry (1-2)			1 / 2 /		for	
3.	Abnormal events (2-4)			4 / 4 /		for	
4.	Major transients (1-2)			1 / 2 /		for	
5.	EOPs entered/requiring substantive actions (1-2)			2 / 2 /		for	
6.	EOP contingencies requiring substantive actions (0-2)			0 / 1 /		for	
7.	Critical tasks (2-3)			1 / 2 /		for	

BROWNS FERRY 2001 EXAM  
OPERATING TEST NO.: 1

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			R1B	R2B	3	4
RO	Reactivity	1	2	1		
	Normal	1	1	3		
	Instrument / Component	4	5,6	3,4	2,4 5,6	
	Major	1	7	7	7	7
As RO	Reactivity	1				
	Normal	0				
	Instrument / Component	2				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument / Component	2				
	Major	1				
SRO-U	Reactivity	0	2	1		
	Normal	1	1,3	X		
	Instrument / Component	2	3,4,5,6	3,4,5,6		
	Major	1	7	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.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: GERARD LASAKA

NRC Reviewer: LARRY S. MELLEN

Competencies	Applicant #1 <u>RO/BOP</u>				Applicant #2 <u>BOP/RO</u>				Applicant #3 <u>SRO-U</u>			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Understand and Interpret Annunciators and Alarms	3,5,6 7	3,5 6,7			3,4 7	2,4 6,7			3,4 5,7	2,3 4,5 6,7		
Diagnose Events and Conditions	5,6,7	3,5 6,7			3,4	2,4 6,7			3,4 5,6 7	2,3 4,5 6,7		
Understand Plant and System Response	2,5,6 7	1,3 5,6 7			2,4	1,2 4,6 7			2,4 5	1,2 3,4 5,6 7		
Comply With and Use Procedures (1)	3,5,6 7	3,5 7			1,3 4	1,2 4,7			1,3 4,5	1,2 3,4 5,7		
Operate Control Boards (2)	2,5,6 7	3,5 6,7			1,2 3,4 7	1,2 4,7			NA	NA		
Communicate and Interact With the Crew	3,5,6 7	3,5 6,7			3,4 7	1,2 4,6 7			3,4 5,6 7	1,2 3,4 5,6 7		
Demonstrate Supervisory Ability (3)	NA	NA			NA	NA			2,3 4,5 6	1,2 3,4 5,6 7		
Comply With and Use Tech. Specs. (3)	NA	NA			NA	NA			3	1,4		
<b>Notes:</b>  (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: GERARD LASKA

NRC Reviewer: LARRY S. MELLEN

Facility: Browns Ferry Nuclear Plant		Date of Exam: September 21, 2001		Exam Level: SRO																																
Item Description				Initial																																
				a	b*	c*																														
1.	Questions and answers technically accurate and applicable to facility			fs		RSB																														
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			fs		RSB																														
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401			fs		RSB																														
1.	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 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)			fs		RSB																														
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	fs	RSB																														
		35	12	53																																
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory	C/A		fs	RSB																														
		43	57																																	
8.	References/handouts provided do not give away answers			fs		RSB																														
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			fs		RSB																														
10.	Question psychometric quality and format meet ES, Appendix B, guidelines			fs		RSB																														
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet			fs		RSB																														
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Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.																																				

Facility: Browns Ferry Nuclear Plant		Date of Exam: September 21, 2001		Exam Level: RO																																
Item Description				Initial																																
				a	b*	c*																														
1.	Questions and answers technically accurate and applicable to facility			fm		psb																														
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			fm		psb																														
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401			fm		psb																														
1.	Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process					NA																														
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: ___ the audit exam was systematically and randomly developed; or ___ the audit exam was completed before the license exam was started; or ___ the examinations were developed independently; or ___ the licensee certifies that there is no duplication; or ___ other (explain)			fm		psb																														
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	fm	psb																														
		34	12	54																																
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory	C/A		fm	psb																														
		46	54																																	
8.	References/handouts provided do not give away answers			fm		psb																														
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			fm		psb																														
10.	Question psychometric quality and format meet ES, Appendix B, guidelines			fm		psb																														
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet			fm		psb																														
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[illegible]

[illegible]

Facility: Browns Ferry Nuclear Plant		Date of Exam: 09/21/01		Exam Level: <u>RO/SRO</u>	
Item Description		Initials			
		a	b	c	
1.	Clean answer sheets copied before grading	<i>HL</i>		<i>fsm</i>	
2.	Answer key changes and question deletions justified and documented	<i>HL</i>		<i>fsm</i>	
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<i>HL</i>		<i>fsm</i>	
4.	Grading for all borderline cases (80% +/- 2%) reviewed in detail	<i>HL</i>		<i>fsm</i>	
5.	All other failing examinations checked to ensure that grades are justified	N/A		N/A <i>fsm</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>HL</i>		<i>fsm</i>	
Printed Name / Signature		Date			
a. Grader	Gerard Laska/ <i>Gerard Laska</i>	10/1/2001 <del>10/21/2001</del>			
b. Facility Reviewer(*)	NA				
c. NRC Chief Examiner (*)	Larry S. Mellen/ <i>Larry S. Mellen</i>	10/9/2001			
d. NRC Supervisor (*)	Michael E. Ernstes/ <i>Michael E. Ernstes</i>	10/25/01			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

Facility: Browns Ferry Nuclear Plant		Date of Exam: 09/21/01		Exam Level: <u>RO/SRO</u>	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	<i>SL</i>		<i>JS</i>		
2. Answer key changes and question deletions justified and documented	<i>SL</i>		<i>JS</i>		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<i>SL</i>		<i>JS</i>		
4. Grading for all borderline cases (80% +/- 2%) reviewed in detail	<i>SL</i>		<i>JS</i>		
5. All other failing examinations checked to ensure that grades are justified	N/A		<i>JS</i> 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	<i>SL</i>		<i>JS</i>		
Printed Name / Signature		Date			
a. Grader	Gerard Laska <i>Gerard Laska</i>	10/11/2001 10/21/2001			
b. Facility Reviewer(*)	NA				
c. NRC Chief Examiner (*)	Larry S. Mellen <i>Larry S. Mellen</i>	10/9/2001			
d. NRC Supervisor (*)	Michael E. Ernstes <i>Michael E. Ernstes</i>	10/25/01			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					



Browns Ferry Exam 2001.

Task Description		Date Complete
1.	Facility written exam comments or graded exams received and verified complete	10-1-2001
2.	Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	10-1-2001
3.	Operating tests graded by NRC examiners	10-1-2001
4.	NRC Chief examiner review of written exam and operating test grading completed	10-9-2001
5.	Responsible supervisor review completed	10/28/01
6.	Management (licensing official) review completed	10/28/01
7.	License and denial letters mailed	10/10/2001
8.	Facility notified of results	10/10/01
9.	Examination report issued (refer to NRC MC 0610)	10/18/01
10.	Reference material returned after final resolution of any appeals	N/A