

COVER SHEET

CATAWBA EXAM
50-413, 414/2001-301

APRIL 2 - 6 & 16 - 20, 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 (o:\drive)
- [✓] ES-403-1 - Written Exam Grading Quality Checklist
- [✓] ES-501-1 - Post Exam Check Sheet

CREW 1

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

Notes:

(1) Includes Technical Specification compliance for an RO.
 (2) Optional for an SRO-U.
 (3) Only applicable to SROs.

Instructions:

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

Author:

Reginald E. Leming

Chief Examiner:

R. Payne

OPERATING TEST NO.: 2
CHRISTOPHER (I1)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2 SRO	3 BOP	4 RO
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1			0	2
	Normal	0			1	0
	Instrument	1			4	0
	Component	1			6b,7	3, 6
	Major	1			5,6	7, 8
SRO-I	Reactivity	0		2		
	Normal	1		1		
	Instrument	1		3,4		
	Component	1		5,6		
	Major	1		7		

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author: *Reginald E. Linn*
 Chief Examiner: *R. Payne*

OPERATING TEST NO.: 2
 HORNE (12)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2 RO	3 SRO	4 BOP
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1		2		0
	Normal	0		0		1
	Instrument	1		3		5
	Component	1		6		4
	Major	1		7		7,8
SRO-I						
	Reactivity	0			2	
As SRO	Normal	1			1	
	Instrument	1			3,4	
	Component	1			6a,6b,7	
	Major	1			5,6	

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author: *Reginald E. Kenney*
 Chief Examiner: *J. Payne*

OPERATING TEST NO.: 2
 PUTNAM (I3)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2 BOP	3 RO	4 SRO
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1		0	2	
	Normal	0		1	0	
	Instrument	1		4	3	
	Component	1		5	6a	
	Major	1		7	5,6	
SRO-I	Reactivity	0				2
	Normal	1				1
	Instrument	1				5
	Component	1				3,4,6
	Major	1				7,8

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Chief Examiner:

Reshale E. Korman
A. Payne

Facility: <u>CATAWBA</u>		Date of Examination: <u>April 2-6 and April 16-20, 2001</u>
Examinations 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)	
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	
-120	3. Facility contact briefed on security & other requirements (C.2.c)	
-120	4. Corporate notification letter sent (C.2.d)	
[-90]	[5. Reference material due (C.1.e; C.3.c)]	
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	 OP WR
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	
<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:		Date of Examination:		
Item	Task Description	Initials		
		a	b*	c
W R I T T E N	1. a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	BO	BO	BO
	b. Assess whether the outline was systematically prepared and whether all knowledge and ability categories are appropriately sampled.	BO	BO	BO
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	BO	BO	BO
	d. Assess whether the repetition from previous examination outlines is excessive.	BO	BO	BO
S I M	2. 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	REK	BO	BO
	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.	REK	BO	BO
	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.	REK	BO	BO
W / T	3. 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	REK	BO	BO
	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.	REK	BO	BO
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	REK	BO	BO
	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.	REK	BO	BO
G E N E R A L	4. a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	REK	BO	BO
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	REK	BO	BO
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	REK	BO	BO
	d. Check for duplication and overlap among exam sections.	REK	BO	BO
	e. Check the entire exam for balance of coverage.	REK	BO	BO
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	REK	BO	BO
a. Author	(900) BRIAN C. HARGENSON / <i>Brian C. Hargenson</i>			
b. Facility Reviewer(*)	Reginald E. Kimray / <i>Reginald E. Kimray</i>			1/2/01
c. Chief Examiner	Gary W. Hamilton / <i>Gary W. Hamilton</i>			1-28-01
d. NRC Supervisor	D. CHARLES PAYNE / <i>D. Charles Payne</i>			2/20/01
	M. E. ERNST / <i>M. E. Ernst</i>			2/12/01

(*) Not applicable for NRC-developed examinations

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 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. 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. Brian Haagensen	PSHA Examiner	[Signature]	12/2/00	[Signature]	2/5/01	
2. Paul Sweetland	PSHA Examiner	[Signature]	12/28/00			
3. Ron Fortier	PSHA Examiner	[Signature]	1/5/01			
4. Reginald Kimrae	Supervisor, Initial Operator Training					
5. Marshall D. Hetter	RO	[Signature]	1/21/01			
6. G. F. W. H. Jr.	SRO	[Signature]	1-27-01			
7. JEFFREY R. BRADLEY	SRO	[Signature]	1-27-01			
8. STAN SINCLAIR	SRO	[Signature]	1-28-01			
9. KEN BEAVER	SRO	[Signature]	1/26/01			
10. Robert T. Simms	SRO	[Signature]	1/29/01	REK	2/5/01	
11. Jamie M. Connell	SRO	[Signature]	2/1/01	[Signature]	5/3/01	
12. John W. Robins	SRO	[Signature]	2-1-01	[Signature]	4-25-01	
13. WALLACE JUDD	SRO	[Signature]	2-1-01	[Signature]	4-27-01	
14. WILLIAM SAUCI	RO	[Signature]	1-27-01	REK	2/5/01	
15. WALTER HUNNITT	RO	[Signature]	2-1-01	[Signature]	5-2-01	

Individuals struck through signed on previous original agreement.
 RE Kimrae 2/5/01

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 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. 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. Brian Haagensen	PSHA Examiner	<i>[Signature]</i>	12/22/00	<i>[Signature]</i>	4/25/01	
2. Paul Swetland	PSHA Examiner	<i>[Signature]</i>	12/28/00			
3. Ron Fortier	PSHA Examiner	<i>[Signature]</i>	1/5/01			
4. Reginald Kimrac	Supervisor, Initial Operator Training					
5. Marshall D Helton	RO	<i>[Signature]</i>	1/21/01	<i>[Signature]</i>	4/25/01	
6. VG Truesdale Jr	SRO	<i>[Signature]</i>	1-27-01	<i>[Signature]</i>	4-25-01	
7. JEFFREY K. BRADLEY	SRO	<i>[Signature]</i>	1-27-01	<i>[Signature]</i>	5-3-01	
8. Stan Sinclair	SRO	<i>[Signature]</i>	1-28-1	<i>[Signature]</i>	4-25-1	
9. KEN BEAVER	SRO	<i>[Signature]</i>	1/26/01	<i>[Signature]</i>	4/25/01	
10. Robert T. Simms	SRO	<i>[Signature]</i>	1/29/01	<i>[Signature]</i>	5/3/01	
11. WILLIAM D. SCHULTZ	RO	<i>[Signature]</i>	1/29/01	<i>[Signature]</i>	5/3/01	
12. Gayle Wood	Sim Support	<i>[Signature]</i>	1/30/01	<i>[Signature]</i>	4/25/01	
13. Glenn Spurlock	Sim Support	<i>[Signature]</i>	1/30/01	<i>[Signature]</i>	4/25/01	
14. John Lawter	Sim Support	<i>[Signature]</i>	1/30/01	<i>[Signature]</i>	4/25/01	
15. Sam Branks	Sim support	<i>[Signature]</i>	1/30/01	<i>[Signature]</i>	4/25/01	

REK signed previously

EXAMINATION SECURITY AGREEMENT

1. Pre-examination:

I acknowledge that I have acquired specialized knowledge about the examination(s) scheduled for the date(s) indicated in this agreement as of the date of my signature and agree that I will not knowingly divulge any information about this examination to any unauthorized persons. An unauthorized person is any individual who has not been approved by an Nuclear Station Training Supervisor to receive specialized knowledge of the examination. I understand that I am not to participate in any instruction, tutoring, or examination involving those candidates scheduled to be administered this examination from this date until completion of examination administration. I further understand that violation of the conditions of this agreement may result in cancellation of the examination and /or enforcement action against me or the facility licensee by whom I am employed or whom I represent.

2. Post-examination:

I did not, to the best of my knowledge, divulge any information concerning the examination(s) administered during the date(s) indicated to any unauthorized persons. I did not participate in instructing those candidates who were administered this examination(s) from the date that I entered into this security agreement until the completion of examination administration.

Examination Date(s) 04/02/2001 to 04/20/2001
REC

Printed Name	Pre examination Certification (1)	Date	Post-Examination Certification (2)	Date
Reginald E. Kimray	<i>RE Kimray</i>	12/4/2000	<i>RE Kimray</i>	4/25/01
John W. Pitesa	<i>J.W. Pitesa</i>	1-2-2001	<i>JW Pitesa</i>	4/27/01
STEVEN P. TRIPI	<i>St. Trip</i>	1-2-2001	<i>St. Trip</i>	5-2-01
JOSEPH E. GUYER	<i>Joe E Guyer</i>	1-8-2001	<i>J E Guyer</i>	4/26/01
Mary Jayne Webster	<i>Mary Jayne Webster</i>	1-8-2001	<i>Mary Jayne Webster</i>	4/27/01
Gary W. Hamilton	<i>Gary W. Hamilton</i>	1-9-2001	<i>Gary W. Hamilton</i>	5-8-01
Ronald Ross Cook	<i>Ronald Ross Cook</i>	1-15-01	<i>Ronald Ross Cook</i>	4/27/01
John Suptela	<i>John Suptela</i>	1-19-01	<i>John Suptela</i>	4/25/01
Jack Brisson	<i>Jack Brisson</i>	1-24-2001	<i>Jack Brisson</i>	5-2-01
JAMES E. BURGESS	<i>James E. Burgess</i>	1-27-2001	<i>James E. Burgess</i>	4-25-01
John Gates	<i>John Gates</i>	1-27-01	<i>John Gates</i>	4-25-01

4/26

1. Pre-Examination

4/12/01 REIC

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/12 to 4/20/01 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 4/12 to 4/20/01 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. R. W. SMITH	OPS INSTRUCTOR	<i>R. W. Smith</i>	4/30/01	<i>R. W. Smith</i>	4/27/01
2. G. L. MCCracken	RO	<i>G. L. McCracken</i>	2/3/01	<i>G. L. McCracken</i>	5/3/01
3. Eric P. Madson	R.O.	<i>Eric P. Madson</i>	2/3/01	<i>Eric P. Madson</i>	5-3-01
4. A C MITTON	SRO	<i>A C MITTON</i>	2/3/01	<i>A C MITTON</i>	5-3-01
5. MARIE MORGAN	ADMIN	<i>Marie Morgan</i>	3/31/01	<i>Marie Morgan</i>	4-25-01
6. VANESSA LAWRY	Admin	<i>Vanessa Lawry</i>	4-2-01	<i>Vanessa Lawry</i>	4/25/01
7. PETER DEALE	S.A. NATIONAL NUCLEAR REGULATOR	<i>Peter Deale</i>	4-3-01		
8. RONALD B. JAMES	Section Mgr	<i>Ronald B. James</i>	4-4-01	<i>Ronald B. James</i>	5/8/01
9. Edward B. Kulesa	Ins tructr	<i>Edward B. Kulesa</i>	4-4-01	<i>Edward B. Kulesa</i>	4/25/01
10. GARY L. DANIELS	SRO	<i>Gary L. Daniels</i>	4/18/01	<i>Gary L. Daniels</i>	4/25/01
11. KAREN G. MCCracken	Admin Specialist	<i>Karen G. McCracken</i>	4-17-01	<i>Karen G. McCracken</i>	4/25/01
12.					
13.					
14.					
15.					

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of Apr 12 - Apr 19, 2001 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.

*Apr. 12, 2001
REK*

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 4/12-4/19/01. 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.	<u>LEE BLANKENSHIP</u>	<u>ENGINEER / LIT</u>	<i>[Signature]</i>	<u>3/6/01</u>	<i>[Signature]</i>	<u>5-2-01</u>
2.	<u>Steve DeGange</u>	<u>JT MGR</u>	<i>[Signature]</i>	<u>5-5-01</u>	<i>[Signature]</i>	<u>5-2-01</u>
3.	<u>Everett T. Beadle</u>	<u>Emergency Planning Manager</u>	<i>[Signature]</i>	<u>5/2/01</u>	<i>[Signature]</i>	<u>5/2/01</u>
4.						
5.						
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11.						
12.						
13.						
14.						
15.						

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 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

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. Brian Haagensen	PSHA Examiner	<i>B Haagensen</i>	12/22/00	<i>B Haagensen</i>	4/25/01	
2. Paul Swetland	PSHA Examiner	<i>P Swetland</i>	12/28/00	<i>P Swetland</i>	5/9/01	
3. Ron Fortier	PSHA Examiner	<i>R Fortier</i>	1/5/01	<i>R Fortier</i>	5/4/01	
4. Reginald Kimrae	Supervisor, Initial Operator Training					
5. Marshall D Helton	RO	<i>M Helton</i>	1/21/01	<i>M Helton</i>	4/25/01	
6. VG Truesdale Jr	SRO	<i>V Truesdale Jr</i>	1-27-01	<i>V Truesdale Jr</i>	4-25-01	
7. JEFFREY K. BRADLEY	SRO	<i>J Bradley</i>	1-27-01			
8. Stan Sinclair	SRO	<i>S Sinclair</i>	1-28-01	<i>S Sinclair</i>	4-25-01	
9. KEN BEAVER	SRO	<i>K Beaver</i>	1-29-01			
10. Robert T. Simms	SRO	<i>R T Simms</i>	1/29/01			
11. WILLIAM D. SCHAEFER	RO	<i>W Schaefer</i>	1/29/01			
12. Gayle Wood	Sim Support	<i>G Wood</i>	1/30/01			
13. Glenn Spurlin	Sim Support	<i>G Spurlin</i>	1/30/01	<i>G Spurlin</i>	4/25/01	
14. John Lawter	Sim Support	<i>J Lawter</i>	1/30/01	<i>J Lawter</i>	4/25/01	
15. Sam Brooks	Sim support	<i>S Brooks</i>	1/30/01	<i>S Brooks</i>	4/25/01	

Facility: CATAWBA		Date of Examination: 4/2-19/01		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).	PKK	but	Ⓢ	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	PKK	but	Ⓢ	
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	PKK	but	Ⓢ	
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	PKK	but	Ⓢ	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	PKK	but	Ⓢ	
2. WALK-THROUGH (CATEGORY A & B) CRITERIA		--	--	--	
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> - initial conditions - initiating cues - references and tools, including associated procedures - validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee - specific performance criteria that include: <ul style="list-style-type: none"> - detailed expected actions with exact criteria and nomenclature - system response and other examiner cues - statements describing important observations to be made by the applicant - criteria for successful completion of the task - identification of critical steps and their associated performance standards - restrictions on the sequence of steps, if applicable 	PKK	but	Ⓢ	
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	N/A	MA	N/A	
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.	PKK	but	Ⓢ	
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	PKK	but	Ⓢ	
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.	PKK	but	Ⓢ	
Printed Name / Signature		Date			
a. Author	<u>Reginald E. Kimray / Reginald E. Kimray</u>	<u>2/3/01</u>			
b. Facility Reviewer(*)	<u>Gary W. Hamilton / Gary W. Hamilton</u>	<u>2-5-01</u>			
c. NRC Chief Examiner (*)	<u>D. Charles Payne / D. Charles Payne</u>	<u>3/5/01</u> 3/29/01			
d. NRC Supervisor (*)	<u>MIKE ERNSTES / Mike Ernestes</u>	<u>3/5/01</u>			
(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.					

Facility: CATAWBA		Date of Exam: 4/2-19/01		Scenario Numbers: 1 / 2 / 3		Operating Test No.: 1	
QUALITATIVE ATTRIBUTES			Initials				
			a	b	c		
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	PEK	GWH	Q			
2.	The scenarios consist mostly of related events.	PEK	GWH	Q			
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)	PEK	GWH	Q			
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.	PEK	GWH	Q			
5.	The events are valid with regard to physics and thermodynamics	PEK	GWH	Q			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives	PEK	GWH	Q			
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	PEK	GWH	Q			
8.	The simulator modeling is not altered	PEK	GWH	Q			
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.	PEK	GWH	Q			
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.	PEK	GWH	Q			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios)	PEK	GWH	Q			
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).	PEK	GWH	Q			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position	PEK	GWH	Q			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes					
1.	Total malfunctions (5-8)	8	6	7			
2.	Malfunctions after EOP entry (1-2)	1	1	2			
3.	Abnormal events (2-4)	6	5	5			
4.	Major transients (1-2)	2	1	2			
5.	EOPs entered/requiring substantive actions (1-2)	2	2	3			
6.	EOP contingencies requiring substantive actions (0-2)	0	1	1			
7.	Critical tasks (2-3)	3	3	2			

Facility: CATAWBA		Date of Exam: 4/2-19/01		Scenario Numbers: 4-1-1		Operating Test No.: 1	
QUALITATIVE ATTRIBUTES			Initials				
			a	b	c		
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	PEK	but	Ⓢ			
2.	The scenarios consist mostly of related events.	PEK	but	Ⓢ			
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)	PEK	but	Ⓢ			
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.	PEK	but	Ⓢ			
5.	The events are valid with regard to physics and thermodynamics	PEK	but	Ⓢ			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives	PEK	but	Ⓢ			
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.	PEK	but	Ⓢ			
8.	The simulator modeling is not altered	PEK	but	Ⓢ			
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	PEK	but	Ⓢ			
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	PEK	but	Ⓢ			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	PEK	but	Ⓢ			
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).	PEK	but	Ⓢ			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position	PEK	but	Ⓢ			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes					
1.	Total malfunctions (5-8)	7	1-1-1	PEK but Ⓢ			
2.	Malfunctions after EOP entry (1-2)	2	1-1-1	PEK but Ⓢ			
3.	Abnormal events (2-4)	6	1-1-1	PEK but Ⓢ			
4.	Major transients (1-2)	2	1-1-1	PEK but Ⓢ			
5.	EOPs entered/requiring substantive actions (1-2)	2	1-1-1	PEK but Ⓢ			
6.	EOP contingencies requiring substantive actions (0-2)	0	1-1-1	PEK but Ⓢ			
7.	Critical tasks (2-3)	2	1-1-1	PEK but Ⓢ			

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

Notes:

(1) Includes Technical Specification compliance for an RO.
 (2) Optional for an SRO-U.
 (3) Only applicable to SROs.

Instructions:

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

Author:

Reginald E. Murray

Chief Examiner:

[Signature]

OPERATING TEST NO.: 2
HARBIN (I4)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2 SRO	3 BOP	4 RO
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1			0	2
	Normal	0			1	0
	Instrument	1			4	0
	Component	1			6b,7	3, 6
	Major	1			5,6	7, 8
SRO-I	Reactivity	0		2		
	Normal	1		1		
	Instrument	1		3,4		
	Component	1		5,6		
	Major	1		7		

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Chief Examiner:

Richard E. Murray
A. Payne

OPERATING TEST NO.: 2
BOYCE (15)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2 RO	3 SRO	4 BOP
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1		2		0
	Normal	0		0		1
	Instrument	1		3		5
	Component	1		6		4
	Major	1		7		7,8
SRO-I	Reactivity	0			2	
	Normal	1			1	
	Instrument	1			3,4	
	Component	1			6a,6b,7	
	Major	1			5,6	

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Reginald E. Kerney

Chief Examiner:

R. Payne

OPERATING TEST NO.: 2
 CALDWELL (I6)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2 BOP	3 RO	4 SRO
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1		0	2	
	Normal	0		1	0	
	Instrument	1		4	3	
	Component	1		5	6a	
	Major	1		7	5,6	
SRO-I	Reactivity	0				2
	Normal	1				1
As SRO	Instrument	1				5
	Component	1				3,4,6
	Major	1				7,8

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Reginald E. Lewis

Chief Examiner:

[Signature]

CREW 3

U-1

R-1

R-2

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

Notes:

- (1) Includes Technical Specification compliance for an RO.
- (2) Optional for an SRO-U.
- (3) Only applicable to SROs.

Instructions:

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

Author:

Reginald E. Fleming

Chief Examiner:

R. Payne

OPERATING TEST NO.: 1
 JOHNSON (U1)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0	2	2		
	Normal	1	1	1		
	Instrument	1	3	3,4		
	Component	1	4,5,6,8	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.

Author:

Reginald E. Kinney

Chief Examiner:

R. Payne

OPERATING TEST NO.: 1
BURGESS (R1)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1 RO	2 BOP	3	4
RO	Reactivity	1	2	0		
	Normal	1	0	1		
	Instrument	2	0	4		
	Component	2	5,8	5		
	Major	1	7	7		

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Reginald E. Kinnear

Chief Examiner:

A. Payne

OPERATING TEST NO.: 1
GLAPINSKI (R2)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1 BOP	2 RO	3	4
RO	Reactivity	1	0	2		
	Normal	1	1	0		
	Instrument	2	3	3		
	Component	2	4,6	6		
	Major	1	7	7		

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Ronald E. Kermis

Chief Examiner:

R. Payne

Competencies	U-2				R-3				R-4			
	Applicant #1 RO/SRO-I/SRO-U				Applicant #2 RO/SRO-I/SRO-U				Applicant #3 RO/SRO-I/SRO-U			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3 SRO	4 SRO	1	2	3 RO	4 BOP	1	2	3 BOP	4 RO
Understand and Interpret Annunciators and Alarms			1-7	1-8			2,3, 5,6	1,4, 5,7, 8			1, 4-7	2,3 6-8
Diagnose Events and Conditions			3-7	3-8			3,5, 6	4,5, 7,8			4-7	3, 6-8
Understand Plant and System Response			1-7	1-8			2,3, 5,6	1,4, 5,7, 8			1, 4-7	2,3 6-8
Comply With and Use Procedures (1)			3-7	3-8			2,3, 5,6	1,4, 5,7, 8			1, 4-7	2,3 6-8
Operate Control Boards (2)			NA	NA			2,3, 5,6	1,4, 5,7, 8			1, 4-7	2,3 6-8
Communicate and Interact With the Crew			1-7	1-8			2,3, 5,6	1,4, 5,7, 8			1, 4-7	2,3 6-8
Demonstrate Supervisory Ability (3)			3-7	3-8			NA	NA			NA	NA
Comply With and Use Tech. Specs. (3)			3,4	3,4, 7			NA	NA			NA	NA
<p>Notes:</p> <p>(1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.</p>												

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:

Reginald E. Kenney

Chief Examiner:

A. Payne

OPERATING TEST NO.: 3
 BEATY (U2)

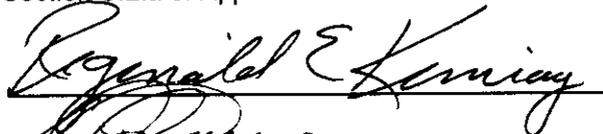
Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

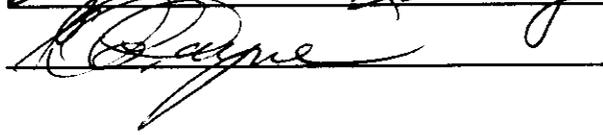
SRO-U	Reactivity	0			2	2
	Normal	1			1	1
	Instrument	1			3,4	5
	Component	1			6a,6b,7	3,4,6
	Major	1			5,6	7,8

- 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.

Author:



Chief Examiner:



OPERATING TEST NO.: 3
CAIN (R3)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3 RO	4 BOP
RO	Reactivity	1			2	0
	Normal	1			0	1
	Instrument	2			3	5
	Component	2			6a	4
	Major	1			5,6	7,8

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Chief Examiner:

Reginald E. Keniaq
R. Payne

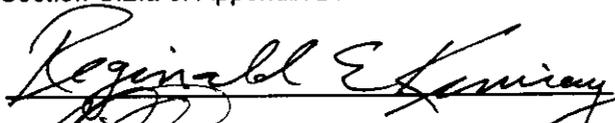
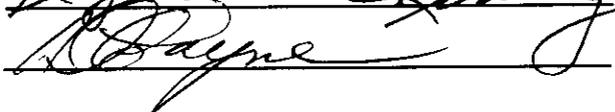
OPERATING TEST NO.: 3
 SAYERS (R4)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3 BOP	4 RO
RO	Reactivity	1			0	2
	Normal	1			1	0
	Instrument	2			4	0
	Component	2			6b,7	3,6
	Major	1			5,6	7,8

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
As SRO	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author: 
 Chief Examiner: 

CREW 5

U-3

R-5

R-6

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

Notes:

- (1) Includes Technical Specification compliance for an RO.
- (2) Optional for an SRO-U.
- (3) Only applicable to SROs.

Instructions:

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

Author:

Reginald E. Kerriay

Chief Examiner:

R. Payne

OPERATING TEST NO.: 1
 BENNETT (U3)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0	2	2		
	Normal	1	1	1		
	Instrument	1	3	3,4		
	Component	1	4,5,6,8	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.

Author:

Reginald E. Conway

Chief Examiner:

[Signature]

OPERATING TEST NO.: 1
GATES (R5)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1 RO	2 BOP	3	4
RO	Reactivity	1	2	0		
	Normal	1	0	1		
	Instrument	2	0	4		
	Component	2	5,8	5		
	Major	1	7	7		

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Ronald E. Kimray

Chief Examiner:

[Signature]

OPERATING TEST NO.: 1
WISNIEWSKI (R6)

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1 BOP	2 RO	3	4
RO	Reactivity	1	0	2		
	Normal	1	1	0		
	Instrument	2	3	3		
	Component	2	4,6	6		
	Major	1	7	7		

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

- 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.

Author:

Reginald E. Murray

Chief Examiner:

[Signature]

Facility: CATAWBA		Date of Exam: 4-12-01		Exam Level: RO/SRO		
Item Description				Initial		
				a	b*	c*
1.	Questions and answers technically accurate and applicable to facility			BGJ	dr	Ⓢ
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			BGJ	dr	Ⓢ
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401			BGJ	dr	Ⓢ
4.	No more than 25 questions are duplicated from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right	NRC	Other	BGJ	dr	Ⓢ
		16	0			
5.	<input checked="" type="checkbox"/> (No less than 5 percent) question duplication from the license screening/audit exam (if independently written) NOTE(1)			BGJ	dr	Ⓢ
6.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank	Modified	BGJ	dr	Ⓢ
		4	17			
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		BGJ	dr	Ⓢ
		CIA				
8.	References/handouts provided do not give away answers			BGJ	dr	Ⓢ
9.	Question distribution meets previously approved examination outline; deviations are justified			BGJ	dr	Ⓢ
10.	Question psychometric quality and format meet ES, Appendix B, guidelines			BGJ	dr	Ⓢ
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet			BGJ	dr	Ⓢ
				Printed Name / Signature		Date
a.	Author	BRIAN C. HARGENSEN / <i>[Signature]</i>				2/8/01
b.	Facility Reviewer(*)	JOHN K. SUPTELA / <i>[Signature]</i>				2/8/01
c.	NRC Chief Examiner(*)	D. CHARLES PAYNE / <i>[Signature]</i>				4/12/01
d.	NRC Regional Supervisor(*)	M.E. ERNSTEJ / <i>[Signature]</i>				4/12/01
Note: * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required. # See special instructions (Section E.2.c) for Items 1, 4, 5, and 6. [] The items in brackets do not apply to NRC-prepared examinations.						

NOTE(1) AUDIT WRITTEN EXAM NOT YET COMPLETED. WILL BE NO OVERLAP WHEN EXAM IS COMPLETE. (Confirmed no overlap 4/13/01 Ⓢ)

Facility: CATAWBA		Date of Exam: 04-12-01		Exam Level: RO/SRO		
Item Description	Initial					
	a	b*	c*			
1. Questions and answers technically accurate and applicable to facility	BQ	JY	Ⓢ			
2. a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	BQ	JY	Ⓢ			
3. RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401	BQ	JY	Ⓢ			
4. No more than 25 questions are duplicated from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right	NRC	Other	BQ	JY	Ⓢ	
	18	0				
5. [No (Less than 5 percent) question duplication from the license screening/audit exam (if independently written)] NOTE (1)	BQ	JY	Ⓢ			
6. Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank	Modified	New	BQ	JY	Ⓢ
	5	22	55			
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	BQ	JY	Ⓢ	
	40	60				
8. References/handouts provided do not give away answers	BQ	JY	Ⓢ			
9. Question distribution meets previously approved examination outline; deviations are justified	BQ	JY	Ⓢ			
10. Question psychometric quality and format meet ES, Appendix B, guidelines	BQ	JY	Ⓢ			
11. The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet	BQ	JY	Ⓢ			
Printed Name / Signature		Date				
a. Author	BRIAN C. HAAGENSEN / <i>[Signature]</i>			2/8/01		
b. Facility Reviewer(*)	JOHN K. SUPTOLA / <i>[Signature]</i>			2/8/01		
c. NRC Chief Examiner(*)	D. CHARLES PAYNE / <i>[Signature]</i>			4/12/01		
d. NRC Regional Supervisor(*)	M. E. ERNSTEIN / <i>[Signature]</i>			4/12/01		
Note: * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required. # See special instructions (Section E.2.c) for Items 1, 4, 5, and 6. [] The items in brackets do not apply to NRC-prepared examinations.						

NOTE (1) AUDIT WRITTEN EXAM NOT YET DEVELOPED. WILL ENSURE NO OVERLAP WHEN AUDIT EXAM IS COMPLETED. (Confirmed no overlap, 4/13)

CATAWBA INITIAL EXAM 2001-301

ES-401

Written Examination
Review Worksheet

Form ES-401-9

Instructions

[Refer to Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).
3. Check the appropriate box if a psychometric flaw is identified:
 - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - The answer choices are a collection of unrelated true/false statements.
 - More than one distractor is not credible.
 - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
 - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
 - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
 - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
 - The question requires reverse logic or application compared to the job requirements.
5. 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?
6. For any "U" ratings, at a minimum, explain how the Appendix B psychometric attributes are not being met.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward			
033	F	3		✓									E	1. Both/mod. Delete word "(pit)" from correct answer B. Is superfluous and jargon.
051	F	4	✓				✓						E	2. SRO/CT00. The stem doesn't make sense to me. Explain "Which one of these two procedures takes priority conditions ..." Also, why would FR-Z.1 be considered the correct procedure? The initial conditions indicate the actions of FR-Z.1 have been completed. So by default, the current procedure in use has precedence unless the action causes a RED path. The supporting reference material indicates that you enter FR-Z.1 from ECA-1.1 as opposed to the situation presented in this question.
080a	H	3											S	3. Both/mod.
096a	H	4											S	4. SRO/mod.
104a	H	4											S	5. Both/mod.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	# units	Back-ward			
121a	H	3					✓						E	6. SRO/mod. The distinction between "who" is the day SWM on 3/20 & 3/21 is fuzzy. Is the guy coming in at 1600 (part of the day SWM shift) considered the "day SWM" or the "night SWM?" Can we go ahead and add a range of times to A & B similar to those in C & D? For example, add the words "between 1200 and 1600" to A and add the words "between 0800 and 1200" to B. This makes it clear the "other" SWM is doing the approving.
124	H	2	✓	✓									E	7. Both/mod. What most achieves ALARA - lowest total dose or lowest individual dose? Add word "total" to stem between "maintain" and "worker." Also need to change times or number of workers for C & D such that no two totals are the same. Otherwise will eliminate as being two correct answers.
162a	F	3		✓									E	8. Both/mod. What does sounding the containment evacuation alarm have to do with stopping a release? Delete. What about VQ? Since you will get an SH signal, VQ will also be isolated. Looks like correct answer should read: "EMF-39 will initiate containment ventilation isolation, and secure VP."
185b	H	5											E	9. Both/bank. Typo in sentence before the table of conditions and parameters. Delete the word "and."
189a	H	4											S	10. Both/mod. What is basis for the ±10% allowance? Why not a smaller band? Distractor A plausibility is a stretch. I don't believe anyone could select this given the procedure AP/17. Distractor A is OK.
190a	F	3											S	11. RO/mod. Explain the difference between this modifies question and the original question. Why was A <u>wrong</u> before but <u>right</u> now? Is MG different from CT?
193a	H	3	✓										E	12. Both/MG97. Stem has conditions that RCS pressure is < S/G pressure so S/G level is decreasing as a result. Consequently, the use of the word "maintain" in each of the answers is confusing and misleading. Can we use a different word?
195b	H	2				✓							E	13. SRO/mod. This appears to be a direct look-up if F-0 is provided. Explain. Also explain distractor A. E-0 is <u>always</u> the governing procedure in Modes 1,2,3. (Assumes the RHR system is NOT in operation and the SI system is operable.)
217a	H	3				✓							E	14. SRO/mod. Power level given in answer C is same as that listed in I.C. So wording is confusing (must <u>remain</u> less than 50% but current power level is exactly 50%.) Change to 58% to match T.S.
263	F	3				✓							E	15. Both/CT99. Answer D is a "NOT" response-should be avoided. The crane is called the "spent fuel pool crane", not the "spent fuel <u>bridge</u> crane." Also how is this answer plausible. I find it hard to believe the elevator has to have the crane <u>over</u> it to operator. Change to: "The spent fuel pool crane is indexed over the SFP." Also, the basis for D being incorrect says there is no interlock to prevent moving the new fuel elevator assoc. with the SFP crane. This contradicts L.P. OP-CN-FH-FHS. Sect. B.1.e) on pg. 17.
282a	F	3											S	16. Both/CT99. Is a Backup Temporary/Diesel VI Compressor addressed in AP/22? No, but the B/U Temporary/Diesel VI Compressor exists in the plant.

CATAWBA INITIAL EXAM
2001-301

ES-401

2

Form ES-401-9

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward			
300b	F	2	✓										E	17. Both/mod97. Add "and location" to stem to make consistent with answers given.
301b	F	3	✓					✓					S	18. SRO/mod97. Concerned that answer B is potentially correct. The basis document says criticality is covered in almost all cases by the S/G pressure limit (except near EOL.) Change stem to reflect BOL conditions.
311	H	3											S	19. Both/CT99. Explain answer.
339a	F	3											S	20. Both/CT97.
343	F	3					✓						E	21. RO/CT97. Does answer A make sense? If you have a ruptured FWST, you wouldn't <u>lose</u> cont. sump <u>level</u> . You would have <u>inadequate</u> cont. sump level.
357a	H	3											S	22. SRO/modCT99.
371	F	2											S	23. RO/MG99. Explain why operator should recognize NCPs were stopped (ans. B)?
380	F	2											S	24. Both/MG99.
387a	F	2											S	25. Both/ModMG99. Explain distractor analysis for C. Answer C discusses pump overheating but the analysis discusses pump runout. Explain why answer D is incorrect. Distractor analysis says the actions are automatic but the Encl. 1 says to manually close vlv. Are you saying this answer is wrong because the operator is expected to immediately implement FOP criteria without waiting for or obtaining SRO permission? Reference provided does not support correct answer of reason for closing the valves
388	H?	2											S	26. Both/MG99. Disagree on LOK (even though this is a previously used Q), only a memory level type Q.
393	H	4											S	27. Both/MG99.
439	F	2											S	28. RO/MG99.
444a	F	3											E	29. Both/MG99. Modified Q? Typo on answers C & D. "VE fans start <u>at on</u> an EMF..)
453a	F	3											S	30. Both/CT99. Explain distractor analysis for answers B & D. Is that really supposed to be "...candidate does not recognize that power is below 69%?"
473	F	3											S	31. Both/MG99.
480a	H	4-5							✓				U	32. RO/MG99. Is this really an RO level question? I see they have a L.O. but NRC doesn't expect RO's to <u>apply</u> T.S., just recognize conditions that require their entry.
503a	H	3											S	33. Both/ModCT99.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
505	H	4										S	34. SRO/CT99.
515a	H	3	✓									E	35. SRO/CT99. Other SLC references provided besides SLC 16.7-10? How time intensive is this question? Would better stem focus improve applicant understanding of desired knowledge? "WOOTF ... action(s) to comply with Technical Specifications/ Site Licensing Commitments?" What is different from previous version?
518	F	3										E	36. Both/CT99. In answer C, the last part of the sentence (... must be manually reset from the control room.) seems to be superfluous and does not accurately reflect info from the L.P. Answer D does not seem plausible. Are any CT penetrations always closed during ops? Why spoon feeding which systems are affected in stem? Will specify KC system only.
547	H	2										E	37. Both/CT99. Spell out words "in" (twice) as "inches". How is vacuum read in MCR? Read in MCR as inches of vacuum.
556	H	4										S	38. Both/CT99.
575	H	2										U	39. SRO/CT99. This question does not meet the K/A. Has nothing to do with a failure of automatic isolation. Also a direct look-up. (Provide copy of 10CFR20, App. B) Will shift K/A's and include 10CFR20, App. B.
580	F	3										S	40. RO/CT99.
585a	F	3										E	41. SRO/ModBank. Used word "indicated" twice in stem's bullet. Change first one to "is". Also add the following to end of Distractor Analysis item B: "... in mode 3,4 or 5."
589b	H	4										S	42. SRO/ModCT99.
596a	F	3										S	43. Both/ModMG00.
647a	H	4										E	44. Both/ModMG00. For seal water injection filter d/p at time 0200, change to "10_0". Will make it consistent with other d/p format and also not mislead (10 vs 1.0).
659	F	2										S	45. SRO/MG00.
661a	H	3										E	46. Both/ModMG00. Concerned about clarity of 4 th bullet in stem re: time it takes to transit the hi rad area.
663a	H	3										S	47. SRO/MG00. Modified?? (since has an "a" suffix on question #)
671a	F	3				✓						E	48. Both/MG00. The stem asks what action must be done to release the WGDT <u>today</u> . But the initial conditions say EMF-50(L) <u>cannot</u> be repaired for 3 days. Thus answer A completely contradicts the I.C. and what the stem is asking. Reword to say a release cannot be done today... Also, change stem to allow this as a possibility.
697a	H	3										S	49. SRO/ModBank.
714	F	3										S	50. Both/New.
715	H	3										S	51. Both/New.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
716	H?	2										S	52. Both/New. Disagree with LOK, think is only F - not H.
717	H?	3		✓								E	53. Both/New. Disagree with LOK, think is only F - not H. For C&D, delete the words "within the first month". Doesn't add anything to Q and is direct from L.P. Also add the word "more" to answer C between words "moves negative". Makes more like D.
718	H	3										S	54. Both/New.
720	H	3				✓						E	55. Both/New. Answer A represents a condition contradicting the I.C. (if containment pressure <u>later</u> increases to 5 psig). Why not end the stem after the word "System" and change the answers to "if cont. press. exceeds..."
721	H	3		✓								E	56. RO/New. Why do you want to provide T.S. 3.6.14? This is not a "recognize T.S. entry conditions" Q. Shouldn't an RO know what "containment divider barrier integrity" means? Seems to me you testing a system design knowledge which requires no ref.
722	H	3										?	57. Both/New. Typo in answer B, only one pump (or should the answer have 'B' and 'C'? as per L.P.). How does this Q match the K/A? (Initiating event should be loss of condensate pumps.) No typo in B, must trip both pumps. Will explain why this matches K/A in distractor analysis.
723	H	3										S	58. Both/New.
724	H	4					✓					?	59. Both/New. Is there any reference that supports the distractor analysis for why the NCS flow rate increases? L.P. says feeding S/G too fast will cause cold slug in Th side of U-tubes which <u>reduces</u> flow.
725	F	2				✓						E	60. Both/New. Add word "only" to end of distractor D to make like B & C.
726	F	3				✓						E	61. Both/New. For answers A & D, why are the words "If open" needed? From I.C. a release is in progress, so 1WG-160 should be open (right?). Delete words.
728	F	3										S	62. Both/New.
729	H	4										S	63. RO/New. Why are the rod positions listed with the higher position first?
730	H	3										E	64. RO/New. Change bullet in stem to read "An 8 gpm leak develops..." or just "A small leak develops..."
731	F	3										S	65. RO/New.
732	H	3										S	66. RO/New.
733	F	3										S	67. RO/New.
734	H	4										S	68. SRO/New.
735	F	2										S	69. RO/New.
736	H	2										S	70. Both/New.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward		
737	H	3										E	71. Both/New. What is basis for distractor order? Swap B & D? Is having the "lows" together and "highs" together the basis? May be OK for that reason. Discuss. Better to put the two "lows" together and the two "highs" together.
738	H	4										S	72. Both/New. In D distractor analysis, shouldn't it say the "ST is normally <u>de</u> -energized?"
739	F	3										S	73. Both/New.
740	F	3	✓					✓				U	74. Both/New. How does this Q match the K/A? L.P. says the that level must be <u>less than 45%</u> not "at". Also, stem doesn't match the explanation in the L.P. very well.
741	F	3	✓									U	75. Both/New. Looks like L.P. says you need all 3 interlocks present to open 2NS-43A. There is no correct answer that matches this. Re-word stem. Also delete the extra spaces in 2ND-1B, 2ND-2A, and 2ND-36B.
743	H	3										S	76. Both/New.
744a	F	3										S	77. Both/New. Question is direct from lesson plan => bank?
745	F	2										S	78. RO/New.
747	H	4										E	79. Both/New. Is it clear which auto fast transfer switch is in DEFEAT position?
748	F	3										S	80. Both/Bank.
749	F	2										S	81. Both/New.
751	F	2										S	82. Both/New.
752	H	3										S	83. Both/New.
754	H	3										S	84. Both/New.
755	F	3										E	85. RO/New. Reverse the order of the items in distractor C (so look like other 3). Also have 2 copies (2 separate folders) of this Q. Am I missing one as a result?
756	H	3										S	86. RO/New.
757	H	1										E	87. Both/New. The distractor analysis and L.P. discuss actuation of a level differential alarm, but the alarm given in the I.C. is a screen hi d/p. It seems rather simplistic to believe that one of the other answers would be selected over choice B.
758	F	2										S	88. RO/New. Rather easy to eliminate the distractors, even if didn't know correct ans.
759	H	3										E	89. SRO/New. Is CACO2 a commonly used term? Is CA CO2 better? Should the term "NEO" be used for "NLO"? Is operability really an issue here? Better way to phrase the answers/distractors? 2 nd bullet in I.C., lead with "The NLO reports the ..." This will make distractor A look more plausible. For distractor C, is the last sentence really necessary? ("No action is required.")

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward			
760	F	2	✓	✓									U	90. SRO/New. How does 2EIA fail? On, off, short, ground, - does it make any difference? Does 2EIA auto swap to VRP? L.P. is not clear. Why provide a reference? (Besides it being 185 pgs long.) What does the index say? How easy is it to identify Encl. 14 as the load list? AP-29 step 9 asks "Verify 1ERPA-ENERGIZED" which answer is 'no'. RNO for the step has a note specifically addressing that auto and manual M/U to the VCT is unavailable and restoring level before reaching 23% eliminates need to swap VCT suction to the FWST. DLU!
761	H	1											S	91. SRO/New. Very simple Q. Since have radiography = high energy, penetrating source = gamma. ∴ toss out C&D. Since terminated liquid release = EMF-49 must be affected = choose A. Is there another, less obvious radiation source to use?
762	H	3				✓							E	92. SRO/New. Distractor C doesn't read right. The 2 nd line says that "since an overall air lock pressure test was conducted on 2/25/01." It implies some <u>prior</u> knowledge of when this testing was done but there is nothing in the I.C. saying this. Also is the only date that has the year appended to it. Make consistent.
763	F	2		✓		✓							U	93. RO/New. The quoted note says (basically) DO NOT TRIP the NC pumps . As a result, I don't see how anyone could consider A or D as plausible. Also B is not that convincing as well. (Rapid decrease?? How about "expedite" decrease?) I would rather have 3 distractors focusing on plausible reasons the NCPs should be kept running, no matter what.
764	H	3	✓										E	94. Both/New. I don't care for this Q. It is too complicated to evaluate. Are all the valves well known (from memory)? Is all the info in the stem necessary? Why can't you say "The crew is responding to an ATWS on Unit 2 per FR-S.1. WOOTF...?"
765	H	3	✓	✓									E	95. SRO/New. 4 th bullet in I.C. says "misalignment", this is a key word. Re-phrase. The timing of this whole scenario is unsettling. You had a runback that reduced power from 100% to 80%. Also some sort of rod misalignment occurred 4 hours ago. How are the two related? I thought the runback caused the misalignment, but 4 hours passing without action is confusing. Also answer A says the <u>power ascension</u> may "continue" ... But nowhere in the I.C. does it say that power was being increased.
766	H	3											E	96. Both/New. Add word "immediate" to stem. What happens if one rod is dropped <u>and</u> one rod is misaligned? Trip reactor? Need another "or misaligned" and another "CRD Bank Select in Manual"
767	H	4	✓					✓					E	97. Both/New. What does the end part of the stem add to the Q? Are you really saying " <u>such that</u> off-site dose is minimized"? Again why have it at all? Distractor C is a subset of D. Need to better distinguish them apart.
768	H	3											E	98. Both/New. The stem says "(what) are the consequences of operator failure to <u>respond</u> to this malfunction." Why would an operator fail to respond? Responding is not the issue is it? Already said the valve cannot be closed. Better to use "...failure to remedy this situation" or "... failure to mitigate this situation". (Or condition).
769	H	4											S	99. Both/New. Good, tough Q.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward			
770	F?	3							✓				U	100. Both/New. This is <u>not</u> an RO level question. Make SRO only and add another RO question, or change to eliminate need to interpret TS. Why is this memory level? Are giving the applicants TS.
771	H	3	✓	✓									U	101. Both/New. This Q is too much like #726. Double jeopardy. How overlap re: valve 1WG-160 and EMF-35. What are you trying to say in the I.C.? Why would the plant even start a release if they knew a packing leak on an isolation valve would be a problem. Delete word "isolation" from 2 nd line - teaching. Can you use another valve?
772	H	3											U	102. SRO/New. Make the 'w' in the word "wide" (4 th bullet) lower letters. Distractors A&D sound hokey. The I.C. say the SM has denied the maintenance request. Saying there was no reason for this makes the SRO appear to be capricious and trite. We know this is not so. Why not make the reader the SM and ask what action should be taken on the request? Also distractor D grammatically doesn't read well. Re-word.
773	F	3											E	103. Both/New. Add single quotes around CNEE-05163 to make consistent with other similar references in the I.C. Distractor C needs work. Why would R&R get to the point of hanging tags if it was based on an outdated drawing. Wouldn't the print need to be updated before the R&R can be completed for review?
774	F	4							✓				S	104. RO/New. Is this an RO level Q? It is borderline, may be OK. How would an RO be in this situation? (RO in MCR alone with SRO on refuel floor?) Why provide TS? This is an immediate action TS. Also is a direct look-up then. At least provide TS 3.3.1 also, if it's decided to give them a procedure.
775	H	3						✓					S	105. Both/New. Distractor C not very plausible but is only one. Explain difference between standing RWP and just an RWP. L.P. material sent with Q does not explain when one would be used over the other.
776	F	2	✓					✓					E	106. Both/Bank. Only Q with "EP" in front of the EOP procedure number. Should we note that the CSF's are not listed in any particular order (or say they are in alphabetical order?) OMP and F-0 have an "NC" in front of INVENTORY and INTEGRITY. Also, terminology is used inconsistently in F-0 and OMP 1-7. Distractor analysis for B doesn't make sense. Core cooling is <u>not</u> the first red condition in the list.
778	H	3					✓	✓					E	107. SRO/New. Distractor A is a subset of distractor C. Need to distinguish A somehow. Change D to "... if RN pump 2A is not <u>restored to service</u> ..." (or <u>restored to operable status</u> , [preferred if doesn't make a correct answer].)
779	H	3		✓									E	108. Both/New. Change stem to read "... correctly align the <u>affected control rod</u> ?" Inconsistent use of terminology [i.e., "C" Group vs C group; in DISCONNECTED vs to the DISCONNECTED position; disconnect switches to CONNECTED vs rods to CONNECTED].
780	F	1		✓			✓						U	109. RO/New. Top half of provided reference spells out NC criteria. Makes Q a direct look-up given the info in the I.C. Need to give Thot, Tcold, and CET trend parameters over 6 minutes (1 reading/minute) and have applicant evaluate whether the parameter is stable or decreasing. (e.g., Tcold: 530, 528, 531, 529, 528, 530 - applicant would have to determine that this was stable) Pick a Tcold < upper limit of upper curve on graph, adjust Thot and CET as necessary. Need to know NC criteria from memory?

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward			
782	F	2					✓						E	110. Both/New. Delete 3 rd word "sufficient" in each answer/distractor. Concerned about distractor A's closeness to being a correct answer depending on meaning of "to develop sufficient flow." Change to something like "to reach full flow" or "to reach full speed."
783	H	3	✓				✓						E	111. Both/New. Need to emphasize the word "initial" in the stem. Have spray valves open and heaters de-energize in 3 of 3 distractors, need to vary this.
786	H	3						✓					E	112. Both/New. Add word "only" to end of answer B (is subset of distractor A.) and D.
788	F	2											S	113. Both/New.
789	F	3	✓										E	114. Both/New. Delete words "could have correctly" from the stem.
790	H	3					✓						E	115. RO/New. All three distractors have 30 days as a release duration. Change one to 14 days. (How about D?)
791	H	3											S	116. Both/New.
792	H	3											S	117. Both/New.
793	H	3											S	118. Both/New.
794	H	3											S	119. RO/New.
795	H	3											S	120. RO/New.
796	H	3											S	121. RO/New. Typo in distractor analysis, item C. Should say "if 1NV-15B <u>closes</u> ..." instead of <u>lifts</u> .
797	F	3											S	122. Both/New. Make sure doesn't test same knowledge as earlier Q. Change stem lead in to "Which".
798	F	3											S	123. Both/New. Error in distractor analysis, item D should say 2EMXL is a train B power supply (vice 2EMXK).
799	F	3											S	124. SRO/New.
800	H	3											E	125. SRO/New. Reword 1 st sentence to avoid "teaching" the applicants. They should know that the consequences of a Pzr level transmitter failing high is a reactor trip. Similarly, for the last initial condition, delete "... to supply seal injection flow to the NCPs. That is teaching as well.

Facility:	Date of Exam:	Exam Level: RO/SRO		
Item Description		Initials		
		a	b	c
1.	Answer key changes and question deletions justified and documented	REK	SK	CP
2.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	REK	SK	CP
3.	Grading for all borderline cases (80% +/- 2%) reviewed in detail	REK	SK	CP
4.	All other failing examinations checked to ensure that grades are justified	REK	SK	CP
5.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	REK	SK	CP

	Printed Name / Signature	Date
a. Grader	Reginald E. Kimray / REK Kimray	4/26/01
b. Facility Reviewer(*)	STEVEN P. TRIPI / <i>SK</i>	4/27/01
c. NRC Chief Examiner (*)	D. Charles Payne / <i>CP</i>	5/11/01
d. NRC Supervisor (*)	M.E. ERNSTES / <i>ME</i>	5/30/01

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

Facility: <u>Catawba Nuclear Station</u>		Date of Examination: <u>4/2 - 24/01</u>
Task Description	Date Complete	
1. Facility written exam comments or graded exams received and verified complete	5/1/01	
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	5/11/01	
3. Operating tests graded by NRC examiners	6/5/01	
4. NRC Chief examiner review of written exam and operating test grading completed	6/5/01	
5. Responsible supervisor review completed	6/5/01	
6. Management (licensing official) review completed	6/5/01	
7. License and denial letters mailed	6/5/01 Denial 6/1/01	
8. Facility notified of results	6/1 & 6/5/01	
9. Examination report issued (refer to NRC MC 0610)	6/7/01	
10. Reference material returned after final resolution of any appeals	N/A	