

Administrative Documents
CATAWBA EXAM 2003-301
50-413 & 50-414

**March 31 - April 4 &
April 10, 2003**

0 1	Exam Preparation Checklist	ES-201-1
2.	Exam Outline Quality Checklist	ES-201-2
✓3.	Exam Security Agreement	ES-201-3
✓4.	Administrative Topics Outline (Final)	ES-301-1 ✓
✓5.	Control Room Systems and Facility Walk-through Test Outline (Final)	ES-301-2 ✓
✓6.	Operating Test Quality Check Sheet	ES-301-3 ✓
✓7.	Simulator Scenario Quality Check Sheet	ES-301-4 ✓
✓8.	Transient and Event Checklist	ES-301-5 ✓
✓9.	Competencies Checklist	ES-301-6 ✓
10.	Written Exam Quality Check Sheet	ES-401- 6 ✓
✓11	Written Exam Review Worksheet	ES-401-9 ✓
✓12.	Written Exam Grading Quality Checklist	ES-403-1
✓13.	Post-Exam Check Sheet	ES-501-1
✓	<i>RECORD OF REJECTED K/As</i>	<i>ES-401-4</i>

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/31/2003 + h rough 4/14/2003 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 3/31/2003 + h rough 4/14/2003 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)	DATENOTE
1. <u>Reginald E. Kimray</u>	<u>Nuc. Sta. Instructor</u>	<u>RE Kimray</u>	<u>9/24/02</u>	<u>RE Kimray</u>	<u>4/16/03</u>
2. <u>Mike D. Ferguson</u>	<u>Shift Supervisor / Instructor</u>	<u>Mike D. Ferguson</u>	<u>10/27/2002</u>	<u>Mike Ferguson</u>	<u>4/17/03</u>
3. <u>John R. SUPELA</u>	<u>NUCLEAR TRAINING SUPERVISOR</u>	<u>John R. Supela</u>	<u>11/5/02</u>	<u>John R. Supela</u>	<u>4/16/03</u>
4. <u>DONALD J. KATALINICH</u>	<u>NUCLEAR STATION INSTRUCTOR</u>	<u>Donald J. Katalinich</u>	<u>11/25/02</u>	<u>Donald J. Katalinich</u>	<u>4/16-03</u>
5. <u>Ronald Ross Cooke</u>	<u>Simulator Support</u>	<u>Ronald Ross Cooke</u>	<u>12-4-02</u>	<u>Ronald Ross Cooke</u>	<u>4-16-03</u>
6. <u>Jody Lawler</u>	<u>Simulator Eng</u>	<u>Jody Lawler</u>	<u>12-4-02</u>	<u>Jody Lawler</u>	<u>5-1-03</u>
7. <u>Gary K. Logan Wood</u>	<u>Shift Supervisor / E shift Eng</u>	<u>Gary K. Logan Wood</u>	<u>12/5/02</u>	<u>Gary K. Logan Wood</u>	<u>4-16-03</u>
8. <u>Sam A. Brooks</u>	<u>Simulator Engineer / Simulator</u>	<u>Sam A. Brooks</u>	<u>12/10/02</u>	<u>Sam A. Brooks</u>	<u>4-17-03</u>
9. <u>Glenn Spurlin</u>	<u>Instructor</u>	<u>Glenn Spurlin</u>	<u>12/10/02</u>	<u>Glenn Spurlin</u>	<u>4-28-03</u>
10. <u>William D. Johnson</u>	<u>Shift Supervisor E shift</u>	<u>William D. Johnson</u>	<u>01/08/03</u>	<u>William D. Johnson</u>	<u>4-28-03</u>
11. <u>Glenn M. Jackson</u>	<u>Nuclear Controls Operator / E shift</u>	<u>Glenn M. Jackson</u>	<u>1/8/03</u>	<u>Glenn M. Jackson</u>	<u>5/16/03</u>
12. <u>John S. Glapinski</u>	<u>NCO E shift</u>	<u>John S. Glapinski</u>	<u>1/8/03</u>	<u>John S. Glapinski</u>	<u>5-16-03</u>
13. <u>MARIE MORGAN</u>	<u>ADMINISTRATOR</u>	<u>Marie Morgan</u>	<u>1-9-03</u>	<u>Marie Morgan</u>	<u>4-16-03</u>
14. <u>Gary W. Hamilton</u>	<u>Ops Trng Mgr</u>	<u>Gary W. Hamilton</u>	<u>1-9-03</u>	<u>Gary W. Hamilton</u>	<u>4-16-03</u>
15. <u>John W. Pitese</u>	<u>Training mgr</u>	<u>John W. Pitese</u>	<u>2-6-03</u>	<u>John W. Pitese</u>	<u>4-28-03</u>

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of ^{3-31-03 thru} ~~4-16-03~~ as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of ^{3-31-03 thru} ~~4-16-03~~. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	Rita Hoover	Sequester	<i>Rita Hoover</i>	4-1-03	<i>Rita Hoover</i>	4-28-03	
2.	Barbara Currence	Sequester	<i>Barbara Currence</i>	4-1-03	<i>Barbara Currence</i>	4-28-03	
3.	Mary Joyn Lebsen	Sequester	<i>Mary Joyn Lebsen</i>	4-1-03	<i>Mary Joyn Lebsen</i>	4-21-03	
4.	Erin Garrison	Sequester	<i>Erin Garrison</i>	4-1-03	<i>Erin Garrison</i>	4/28/03	
5.	Jeff Niebarding	NRO surrogate	<i>Jeff Niebarding</i>	4-3-03	<i>Jeff Niebarding</i>	4/28/03	
6.	CF Kiker, Jr.	Instructor	<i>CF Kiker, Jr.</i>	4-11-03	<i>CF Kiker, Jr.</i>	4-17-03	
7.	Janette Turk	Admin Spec	<i>Janette Turk</i>	4-14-03	<i>Janette Turk</i>	4-28-03	
8.	Russell Edmond	Nuclear Instructor	<i>Russell Edmond</i>	15 APR 03	<i>Russell Edmond</i>	16 APR 03	
9.	J L YON	NUCLEAR INSTRUCTOR	<i>J L YON</i>	16 APR 03	<i>J L YON</i>	16 APR 03	
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1. Pre-Examination

3/31/2003 through

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/14/2003 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 3/31/2003 through 4/14/2003. 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 DATE NOTE	SIGNATURE (1)	DATE	SIGNATURE (2)
1.	Brian D. Miller	NCO E-SHIFT	<i>B.D. Miller</i>	2/25/03	<i>B.D. Miller</i>
2.	Allen D. Berak	Ops Instructor	<i>A. D. Berak</i>	3/14/03	<i>A. D. Berak</i>
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1. Pre-Examination

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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 3/31 - 4/10/03 from the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. DAVID DEARRELL	SIMULATOR CONTRACTOR	<i>David Dearrell</i>	12/11/02		
2. Jeffrey Forkeas	Simulator Contractor	<i>Jeffrey Forkeas</i>	2/11/03		
3. Thomas ROETZSCH	SRO	<i>Thomas Roetzsch</i>	2/12/03		5/14/03

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1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/31-4/10/03, as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	DAVID OFARRELL	SIMULATOR CONTRACTOR	<i>David Farrell</i>	12/11/02			
2.	Jeffrey Berkowski	SIMULATOR CONTRACTOR	<i>Jeffrey Berkowski</i>	12/11/02	<i>Jeffrey Berkowski</i>	4/10/03	
3.	THOMAS POETZSCH	SRN	<i>Thomas Poetzsch</i>	2/12/03			
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i. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/31 - 4/10/03 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE/NOTE
1. <u>DAVID OFARRELL</u>	<u>SIMULATOR CONTRACTOR</u>	<u>[Signature]</u>	<u>12/11/02</u>	<u>[Signature]</u>	<u>4/21/03</u>
2. <u>Jeffrey Borkowski</u>	<u>Simulator Contractor</u>	<u>[Signature]</u>	<u>12/11/02</u>		
3. <u>THOMAS POETZSCH</u>	<u>SRO</u>	<u>[Signature]</u>	<u>2/12/03</u>		
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1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 2/11 - 4/18/03 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of _____. 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
1. BRUCE C. HARRISON	PSHA EXAMINER / NRC EXAM	<i>[Signature]</i>	12/9/02	<i>[Signature]</i>	4/20/03
2. PAUL SWERTLAND	PSHA EXAMINER / NRC EXAM	<i>[Signature]</i>	12/10/02		
3. RAY FOSTER	PSHA EXAMINER / NRC EXAM				
4. KEITH PARKINSO	PSHA EXAMINER / NRC EXAM	<i>[Signature]</i>	12/10/02	<i>[Signature]</i>	4/20/03
5. ROY FOSTER	PSHA EXAMINER / NRC EXAM	<i>[Signature]</i>	12/10/02	<i>[Signature]</i>	4/20/03

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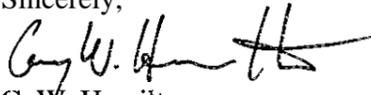
May 19, 2003

Mr. Edwin Lea
US NRC Region II
Atlanta Federal Center
61 Forsyth Street, S. W.
Suite 231'85
Atlanta, Georgia 30303

Edwin,
Enclosed is the security agreement for the Initial Licensing Exams administered the weeks of March 31 through April 16, 2003. You will notice that the final signatures for David O'Farrell and Jeffrey Borkowski were obtained on fax copies of the original security agreement. This was necessary because these individuals are no longer on the Catawba site. **Also**, Paul Swetland signed on the line by Ron Fortier's name. Because of this, Ron Fortier signed on the next available line. The signature line by Paul Swetland's name is blank.

If you have any questions, please contact Reggie Kimray at (803) 831-3118 or John Suptela at (803) 831-5123.

Sincerely,


G. W. Hamilton
Operations Training Manager

Facility: Catawba		Date of Examination: March 31, 2003 - April 18, 2003	
Examination Level: RO		Operating Test Number: 1	
Administrative Topic (see Note)	Describe activity to be performed		
Conduct of Operations	Perform a Manual Shutdown Margin Calculation		
Conduct of Operations	Monitor Reactor Coolant System leakage during loss of Operator Aid Computer		
Equipment Control	Classify Emergency Diesel Generator start and make required log entries		
Radiation Control	Calculate Low Pressure Service Water Flow for liquid radioactive release		
Emergency Plan			
NOTE: All items (5 total) are required for SROs. RO applicants require 4 items unless they are retaking only the administrative topics, when 5 are required.			

Facility: Catawba		Date of Examination: March 31, 2003 - April 18, 2003	
Examination Level: SRO		Operating Test Number: 1	
Administrative Topic (see Note)	Describe activity to be performed		
Conduct of Operations	Perform a Manual Shutdown Margin Calculation		
Conduct of Operations	Evaluate Reactor Coolant System leakage and determine Tech Spec actions during loss of Operator Aid Computer		
Equipment Control	Perform a review of an R&R procedure		
Radiation Control	Calculate Low Pressure Service Water Flow for liquid radioactive release		
Emergency Plan	Upgrade to a higher emergency classification		
NOTE: All items (5 total) are required for SROs. RO applicants require 4 items unless they are retaking only the administrative topics, when 5 are required.			

Facility: Catawba		Date of Examination: Mar 32- Apr 18, 2003
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: 1
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
a. 004/Respond to Inadvertent Dilution While Shutdown (NV-119)	M, A, L, S	1
b. 026/Align the NS System to Cold Leg Recirculation (NS-104)	M, A, S	5
c. 015/Take Power Range Drawer Out of Service (ENB-002)	D, C	7
d. 003/Start Reactor Coolant Pump 1B (NCP-081)	D, C	4 Primary
e. 061/Establish Feedwater to a Hot Dry Steam Generator (CSF-005)	D, C	4 Secondary
f. 006/Transfer Emergency Core Cooling System to Hot Leg Recirculation (NI-098)	D, A, S	3
g. 008/Respond to a Leak in the Component Cooling System	N, A, S	8
h. 002/ Vent the Reactor Vessel Head Following a Small Break LOCA	M, C	2
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. 013/Restore the VA System to Normal Following an Inadvertent Safety Injection Actuation	D, R	2
j. 078/Startup Backup Temporary VI Compressor (VI-002)	D	8
k. 064/Place SSF Diesel in Operation (AD-003)	D	6
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

Bolded items are from the 2001 initial exam at Catawba.

Facility: Catawba		Date of Examination: Mar 31- Apr 18, 2003	
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: 1	
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)			
System / JPM Title	Type Code*	Safety Function	
a. 004/Respond to Inadvertent Dilution While Shutdown (NV-119)	M, A, L, S	1	
b. 026/Align the NS System to Cold Leg Recirculation (NS-104)	M, A, S	5	
c. 015/Take Power Range Drawer Out of Service (ENB-002)	D, C	7	
d. 003/Start Reactor Coolant Pump 1B (NCP-081)	D, C	4 Primary	
e. 061/Establish Feedwater to a Hot Dry Steam Generator (CSF-005)	D, C	4 Secondary	
f. 006/Transfer Emergency Core Cooling System to Hot Leg Recirculation (NI-098)	D, A, S	3	
g. 008/Respond to a Leak in the Component Cooling System	N, A, S	8	
h.			
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i. 013/Restore the VA System to Normal Following an Inadvertant Safety Injection Actuation	D, R	2	
j. 078/Startup Backup Temporary VI Compressor (VI-002)	D	8	
k. 064/Place SSF Diesel in Operation (AD-003)	D	6	
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA			

Bolded items are from the 2001 initial exam at Catawba.

Facility: Catawba		Date of Examination: Mar 31- Apr 18, 2003
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: 1
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
a. 004/Respond to Inadvertent Dilution While Shutdown (NV-119)	M, A, L, S	1
b. 061/Establish Feedwater to a Hot Dry Steam Generator (CSF-005)	D, C	4
c. 026/Align the NS System to Cold Leg Recirculation (NS-104)	M, A, S	5
d.		
e.		
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h.		
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. 068/Transfer HVAC Controls to "Local" Following Control Room Evacuation (RSS-003)	D, R	8
j. 064/Place SSF Diesel in Operation (AD-003)	D	6
k.		
* 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		

Bolded items are from the 2001 initial exam at Catawba.

Facility: <u>Catawba</u>		Date of Examination: <u>3/31/03</u>		Operating Test Number: <u>1</u>	
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)	REK	Quik	LJL	
b	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	REK	Quik	LJL	
c	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a)	REK	Quik	LJL	
d	Overlap with the written examination and between different parts of the operating test categories is within acceptable limits.	REK	Quik	LJL	
e	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	REK	Quik	LJL	
2. WALK-THROUGH (CATEGORY A & B) CRITERIA		--	--	--	
a	Each JPM includes the following, as applicable: <input type="checkbox"/> initial conditions <input type="checkbox"/> initiating cues <input type="checkbox"/> references and tools, including associated procedures <input type="checkbox"/> reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee <input type="checkbox"/> specific performance criteria that include: - 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	REK	Quik	LJL	
b	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	N/A	N/A	N/A	
c-b	Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.	REK	Quik	LJL	
d-c	At least 20 percent of the JPMs on each test are new or significantly modified.	REK	Quik	LJL	
3. SIMULATOR (CATEGORY G) CRITERIA		--	--	--	
a	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	REK	Quik	LJL	
		Printed Name / Signature		Date	
a	Author	<u>Reginald E. Kimray / Reginald E. Kimray</u>		<u>3/21/03</u>	
b	Facility Reviewer(*)	<u>Gary W. Hamilton / Gary W. Hamilton</u>		<u>3-21-03</u>	
c	NRC Chief Examiner (#)	<u>Edwin Lee, Jr. / Edwin Lee, Jr.</u>		<u>3/27/03</u>	
d	NRC Supervisor	<u>LEE R. MILLER / Lee R. Miller</u>		<u>3/27/03</u>	
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.					

Facility: Catawba		Date of Exam: 3/31/03		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.	REK	CSH	LS			
2.	The scenarios consist mostly of related events.	REK	CSH	LS			
3.	Each event description consists of <input type="checkbox"/> the point in the scenario when it is to be initiated <input type="checkbox"/> the malfunction(s) that are entered to initiate the event <input type="checkbox"/> the symptoms/cues that will be visible to the crew <input type="checkbox"/> the expected operator actions (by shift position) <input type="checkbox"/> the event termination point (if applicable)	REK	CSH	LS			
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.	REK	CSH	LS			
5.	The events are valid with regard to physics and thermodynamics.	REK	CSH	LS			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	REK	CSH	LS			
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.	REK	CSH	LS			
8.	The simulator modeling is not altered.	REK	CSH	LS			
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	REK	CSH	LS			
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.45 of ES-301.	REK	CSH	LS			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	REK	CSH	LS			
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).	REK	CSH	LS			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	REK	CSH	LS			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4-B5.d)		Actual Attributes					
1.	Total malfunctions (5-8)	7	7	7			
2.	Malfunctions after EOP entry (1-2)	3	2	2			
3.	Abnormal events (2-4)	4	4	5			
4.	Major transients (1-2)	1	1	1			
5.	EOPs entered/requiring substantive actions (1-2)	2	2	1			
6.	EOP contingencies requiring substantive actions (0-2)	1	1	0			
7.	Critical tasks (2-3)	2	2	2			

Facility: Catawba		Date of Exam: 3/31/03	Scenario Numbers: 4/ /	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.	REK	Garth	h.l.		
2.	The scenarios consist mostly of related events.	REK	Garth	h.l.		
3.	Each event description consists of <input type="checkbox"/> the point in the scenario when it is to be initiated <input type="checkbox"/> the malfunction(s) that are entered to initiate the event <input type="checkbox"/> the symptoms/cues that will be visible to the crew <input type="checkbox"/> the expected operator actions (by shift position) <input type="checkbox"/> the event termination point (if applicable)	REK	Garth	h.l.		
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.	REK	Garth	h.l.		
5.	The events are valid with regard to physics and thermodynamics.	REK	Garth	h.l.		
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	REK	Garth	h.l.		
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.	REK	Garth	h.l.		
8.	The simulator modeling is not altered.	REK	Garth	h.l.		
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	REK	Garth	h.l.		
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.45 of ES-301.	REK	Garth	h.l.		
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	REK	Garth	h.l.		
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).	REK	Garth	h.l.		
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	REK	Garth	h.l.		
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4-D5.d)		Actual Attributes				
1.	Total malfunctions (5-8)	6	1	1		
2.	Malfunctions after EOP entry (1-2)	2	1	1		
3.	Abnormal events (2-4)	4	1	1		
4.	Major transients (1-2)	1	1	1		
5.	EOPs entered/requiring substantive actions (1-2)	2	1	1		
6.	EOP contingencies requiring substantive actions (0-2)	1	1	1		
7.	Critical tasks (2-3)	2	1	1		

OPERATING TEST NO.: 1

Applicant Type	Evolution Type	Minimum Number	Scenario Number							
			1		2		3		4	
			RO	BOP	RO	BOP	RO	BOP	RO	BOP
RO	Reactivity	1*		1		1		1		1
	Normal	1*	2		2		2		2	
	Instrument/Component	4*	4, 6	3, 5	6, 7	3, 4	3, 6	4, 5	4, 6	3, 5
	Major	1	7	7	8	8	7a	7a	7	7
As RO	Reactivity	1*								
	Normal	0	2		2		2		2	
	Instrument/Component	2*	4, 6		6, 7		3, 6		4, 6	
	Major	1	7		8		7a		7	
SRO-I	Reactivity	0	1		1		1		1	
	Normal	1*	2		2		2		2	
	Instrument/Component	2*	3, 4, 5, 6		3, 4, 6, 7		3, 4, 5, 6		3, 4, 5, 6	
	Major	1	7		8		7a		7	
As SRO	Reactivity	0	1		1		1		1	
	Normal	1*	2		2		2		2	
	Instrument/Component	2*	3, 4, 5, 6		3, 4, 6, 7		3, 4, 5, 6		3, 4, 5, 6	
	Major	1	7		8		7a		7	
SRO-U	Reactivity	0	1		1		1		1	
	Normal	1*	2		2		2		2	
	Instrument/Component	2*	3, 4, 5, 6		3, 4, 6, 7		3, 4, 5, 6		3, 4, 5, 6	
	Major	1	7		8		7a		7	

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity Manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. * Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a one-for-one basis.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicants competence count toward the minimum requirement.

Author:

Ronald E. Linnay

Chief Examiner:

L. Edwin Lee, Jr. 3/27/2003

Competencies	SRO				RO				BOP			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/ Diagnose Events and Conditions	3-10	3-10	3-9	3-9	4, 6-8	6-9	3, 6-8	4, 6, 7, 9	3, 5, 7, 9, 10	3-5, 8, 10	4, 5, 7, 7a, 9	3, 5, 7, 8
Comply With and Use Procedures (1)	1-10	1-10	1-9	1-9	2, 4, 6-10	2, 6-10	2, 3, 6-8	2, 4, 6, 7, 9	1, 3, 5, 7-10	1, 3, 4, 8-10	1, 4, 5, 7, 7a, 9	1, 3, 5, 7, 8
Operate Control Boards (2)	N/A	N/A	N/A	N/A	2, 4, 6-10	2, 6-10	2, 3, 6-8	2, 4, 6, 7, 9	1, 3, 5, 7, 9, 10	1, 3, 4, 8-10	1, 4, 5, 7, 7a, 9	1, 3, 5, 7, 8
Communicate and Interact	1-10	1-10	1-9	1-9	2, 4, 6-10	2, 6-10	2, 3, 6-8	2, 4, 6, 7, 9	1, 3, 5, 7-10	1, 3, 5, 8-10	1, 4, 5, 7, 7a, 9	1, 3, 5, 7, 8
Demonstrate Supervisory Ability (3)	3-10	3-10	3-9	3-9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Comply With and Use Tech Specs. (3)	3.4	3.4	3.4	5, 6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Notes:

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

Instructions:

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

Author:

Reginald E. Kinney

Chief Examiner:

Richard Lee, Jr. 3/27/2003

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A			SRO Only
1	H	3										Y		S	
2	H	3					X					Y		E	The answer as written is incorrect. According to the information given in the stem, addition to the tank has been stopped. WILL REPLACE QUESTION
3	F	2										Y		S	
4	F	2										Y		E	Reword the stem: Following the completion of FR-P1 and a report from the STA that all CSFs FOLLOWING THE COMPLETION OF FR-P1 AND A REPORT FROM THE STA THAT ALL CSFS ARE GREEN, WHICH IS THE CORRECT TRANSITION
5	F	2	X		X							Y		E	DistractorD could be correct based on the judgment made by the candidate. The stem made need additional information (K/A is EA2.1 not 2.21)...CHANG K/A IF THE SRO DETERMINED THAT THEY ARE RESPONDING TO THE EVENT IN THE WRONG PROCEDURE...WHICH ONE OF THE FOLLOWING IS THE EARLIEST TIME THAT THE SRO COULD HAVE TRANSITIONED TO ES-.....
6		3	X									Y		E	How can the most restrictive release rate and the recommended release rate be the same? CHANGE STEM
7	F	2										Y		S	
8	F		X	X								Y		S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
9	H												Y		?	Need to determine how long this question will take. THIS QUESTION MAY TAKE 20 MINUTES THE LICENSEE SAID THAT IT IS NOT A PROBLEM

Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- 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).
- 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.
 One or more than one distractors 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).
- 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 KIA 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.
- Check questions that are sampled for conformance with the approved K/A and those that are designated SRO-only (K/A and license level mismatches are unacceptable).
- 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?
- At a minimum, explain any "U" ratings (e.g., how the Appendix 5 psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minuta	#/units	Backward	Q=K/A	SR Only			
10	F		X	X									Y		E	Cues are contained in the initial conditions and the stem...REMOVE .. DO NOT ASSUME IT TAKES....
11	H												Y		S	
12	H		X										Y		E	Need to modify stem .. WHICH ONE OF THE FOLLOWING IS THE FIRST REQUIRED REQUIRED ACTIONS.....
13													Y		S	
14	H					X							Y		E	DistractorA is not plausible, and DistractorB could be correct .. THERE IS A DIFFERENCE BETWEEN THE CONTROL PANEL INFORMATION TAG AND WORK REQUEST DEFFICIENCY TAG (DIST B) CHANGED STEM.....
15	H	2											Y		S	
16	H	3				X							Y		E	Change distractorA time to 0700 . CHANGING DISTRACTORS - OPERATIONS MAY CONTINUE INDEFICITELY.....
17	H	3	X										Y		E	Need to give S/G levels; as is there could be two answers...ADDED INFORMATION TO GIVEN TOTAL CA FLOW INDICATES 460GPM AND S/G PRESSURE IN ALL S/GIS 1150 PSIG
18	H	3											Y		S	
19	F	2											Y		S	
20	F	2	X										Y		E	Add a word "the" to the stem, or When is NRC notification Required.....WHICH ONE OF THE FOLLOWING IS THE CORRECT REQUIREMENT TO ...
21	H	3											Y		S	
22	H	3				X							Y		E	There could possible be two correct answers; After completing the swap over, would the 2B NS pump not have been returned to it auto position as part of the system alignment requirements? The stem says "Following the completion of the swapover..... CHANGED STEM AND DISTRACTOR

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minuta	#/units	Backward	Q=K/A	SR O Only		
23	F	2										Y		S	
24	F	2										Y		S	
25	F	2	X	X								Y		E	The stem provides a cue: procedure number - A power reduction was started per procedure at - Would you expect them to start a power reduction on the initial report or once the findings have been verified NO CHANGES REQUIRED.....

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
41	H	3										Y		S	
42	H	3										Y		S	
43	F	2										Y		S	
44	F	2										Y		S	
45	F	2										Y		S	
46	F	2								X		N		U	K/A is incorrect - Natural Circ Question DECIDED THAT K/A WOULD WORK BY USING ANOTHER K/A IN SAME AREA (K1.02)
47	F	3										Y		E	Possible two correct answers - B and D, Change distractor A : REWRITING ALL DISTRACTORS
48	F	2				X						Y		S	
49	H	2	X	X								Y		E	Providing the words "Pump bearings" is not necessary. Reference provided in incomplete - unable to validate answer. CHANGED DISTRACTORS C AND B TO READ "ONLY"
50	H	3										Y		S	
51	H	3										Y		S	
52	F	2				X						N		U	Wrong K/A; K/A should be 2.1.17; Distractor "D" needs to be changed WILL REPLACE QUESTION
53	F	2										Y		S	
54	H	3										Y		S	
55	F	2										Y		S	
56		3										Y		S	
57	F	2										Y		S	
58	F	2										Y		S	
59	F	2										N		U	Wrong K/A: Looks like it should be 033AA2.01: WILL CHANGE TO CORRECT K/A; WILL ALSO REWORD STEM TO ADD A FAULT OF THE I/R. WILL MODIFY DISTRACTORS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
60	F	2											Y		S	
61	F	2											Y		S	
62	F	3	X										Y		E	The stem needs to be reworded - to match distractors: CHANGE DISTRACTOR A TO READ REDUCE POWER LESS THAN 69 %; CHANGE ANSWER TO "C"
63	F	2											Y		S	
64	F	2											Y		S	
65	H	3											Y		E	Change APE to EPE in the K/A: WILL CHANGE
66	F	2											Y		S	
67	F	2											Y		S	
68	H	2											Y		E	Distractor D should be changed: CHANGED DISTRACTORS A AND C
69	F	2				X							Y		S	
70	F	2				X							Y		E	Remove "Because 1B and 2B.... from the distractor A & B REMOVED
71	F	2				X							Y		E	Change distractor "A" CHANGED DISTRACTOR A
72	H	2	X										Y			There appears to be information missing from the stem - there is no way the applicant can answer the question with the information given: WILL REPLACE QUESTION
73	F	2				X							Y		E	Change distractor "A" : CHANGED DISTRACTOR A AND C
74	F	2				X							Y		E	Change distractor "D" to a power supply : DECIDED NOT TO CHANGE DISTRACTOR
75	H	2											Y		S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
<p>Instructions</p> <p>[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]</p> <p>1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.</p> <p>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).</p> <p>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. One or more than one distractors 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).</p> <p>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.</p> <p>5. Check Questions that are sampled for conformance with the approved K/A and those that are designated SRO-only (K/A and license level mismatches are unacceptable).</p> <p>6. 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?</p> <p>7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).</p>																

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
1	H	2										Y		S	
2	H	2				X						Y		E	103K4.06 (3.1/3.7) Distractor D may also be correct.? CHANGED THE QUESTION AND DISTRACTOR
3	F	2										Y		S	
4	H	2										Y		S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
5	M	2				X							Y		U	034K6.02(2.6/3.3) Distractors B and D are not plausible. DISTRACTORS ARE OK AS IS
6	M	1				X							Y		E	079AA.01(2.7/2.7) Distractor A does not appear to be plausible. Balance distractors - CHANGED DISTRACTORS
7	M	2				X							Y		E	040AK2.01(2.6/2.5) Distractor B is not plausible.
8	M	2											Y		S	
9	M	2											Y		E	G2.1.20(4.2/4.2) needs a statement saying that the communicator does not have sight of the step being performed. Otherwise, C could be correct. CHANGED THE WORDING IN THE STEM
10	H	2				X							Y		U	G2.3.2(2.5/2.9) B also appears to be a correct answer. WILL CHANGE DISTRACTOR D
11	M	1				X							Y		U	G2.2.27(2.6/3.5) 3 distractors are not plausible. BRIAN WILL FIX : CHANGE DISTRACTOR "B"
12	H	2											Y		S	
13	H	2											Y		S	
14	M	2											Y		S	
15	M	2				X							Y		S	
16	M	3				X								N	E	033K2.01(3.0/3.5) Distractors B and D are not credible as written, should say to begin unit shutdown in 1 hour. K/A does not match. K/A should be A2.01 A2.01 IS THE CORRECT K/A
17	H												Y		S	
18	H	2												N	U	068AA1.12(4.4/4.4) The K/A asks for ASP controls and indications, however the question never addresses these. Also some problems with question itself, what causes S/G levels to lower with Feed pumps still running, Distractor analysis states that Reactor Trip is on S/G lo-lo water level but reactor should trip on a turbine trip? Need to talk about this one. WILL CHANGE THE STEM
19	M	2											Y		S	

Q#	1		2											6.	7.
	.OK (E/H)	LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other			
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
20	M	2										N		U	WE/01 EK3.3 (3.5/3.3) Knowledge of the reasons for the following responses as they apply to the (reactor trip or safety injection/rediagnosis. Manipulation of controls required to obtain desired operation results during abnormal and emergency situations. Does not match K/A listed on question sheet OK AS IS.
21	M	2										Y		S	
22	M	2										Y		S	
23	M	3										Y		S	
24	M	2										Y		E	056K1.03 (2.6/2.6)...What mode is the valve operating in, or did a full load rejection occur? Looking at the information in the lesson material this valve operates in two modes, and this may confuse some applicants. BRIAN WILL ADD INFORMATION TO THE STEM
25	H	2										Y		S	
26	M	2										N		U	WE03EK2.2 (3.7/4.0) K/A Knowledge of the interrelations between the (LOCA Cooldown and Depressurization)and the following Facility's heat removal systems including primary coolant, emergency coolant, the decay heat removal systems and relations between the proper operation of these systems to the operation of the facility. There is no change needed to the question - H K/A IS OK.....
27	H	2										N		U	061 A2.05 (3.1/3.4) WA Ability to (a) predict the impact of the following malfunctions or operations on the AFW; and (b) based on those predictions. use procedures to correct, control, or mitigate the consequences of those malfunctions or operations. The listed question does not meet part (b) of the WA, need to add procedures to mitigate. THERE IS REALLY NO NEED TO TRY AND MATCH EVERY ASPECT OF THE K/A - (A) IS A MATCH WHICH IS SUFFICIENT: THEREFORE WE CAN LEAVE IT AS IS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
28	H	2											N	U	G2.4.2 (3.9/4.1) Knowledge of system set points, interlocks and automatic actions associated with EOP entry conditions. The listed question does not have an EOP entry. AP/23 is entered. Also the distractors assume that the plant stabilizes in automatic control, but there is no mention of this in the stem. Distractor analysis states that Tref of 577 degrees F + a 3 degree dead band would be maintained. I think this should be 557 degrees. Why are references required. BRIAN WILL REPLACE THE K/A
29	M	2											Y	S	G2.1.11 Knowledge of less than one hour technical specifications action statements for systems. THIS IS OK - REALLY NO PROBLEM
30	H	2											Y	S	
31	H	2											Y	S	
32	M	2											Y	S	
33	H	2											Y	E	The question asks: which one of the following would result in an automatic reactor trip, the trip is from a safety injection signal, could be argued that an automatic reactor trip signal was not generated. Just remove the word automatic. (Which one of the following would result in a reactor trip). DID NOT AGREE TO REMOVE THE WORD AUTOMATIC BECAUSE IT WOULD MAKE "A" CORRECT PER PLANT PROCEDURE - REQUIRING A MANUAL TRIP.
34	H	2											N	U	A1.02 (3.2/3.3) Ability to operate and or monitor the as they apply to the Loss of Nuclear Service Water (SWS): Loads on the SWS in the control room. The question is asking what would happen on a fault, but does not address any loads off the SWS. DECIDED THAT K/A WILL WORK
35	H	2											Y	S	
36	F	2											Y	S	
37	H												N	U	Wrong K/A DECIDED THAT K/A WOULD WORK
38	H	3											Y	S	
39	H	3											Y	S	
40	F	2											Y	S	

Facility:		Date of Exam:		Exam Level: RO/SRO		
Item Description				Initials		
				a	b	c
1.	Clean answer sheets copied before grading	BCJ	N/A	td		
2.	Answer key changes and question deletions justified and documented	BCJ		td		
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	BCJ		td		
4.	Grading for all borderline cases (80 +/- 2% overall and 70 +/- 4% on the SRO-only) reviewed in detail	BCJ		td		
5.	All other failing examinations checked to ensure that grades are justified	N/A		N/A		
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	BCJ		td		

	Printed Name / Signature	Date
a. Grader	(F2C) BRIAN C. HAAGENSEN / <i>Brian Haagensen</i>	4/11/2003
b. Facility Reviewer(*)	N/A	
c. NRC Chief Examiner (*)	<i>Edwin Lee</i> / Edwin Lee	4/29/2003
d. NRC Supervisor (*)	MIKE EARSTEN / <i>Mike Earsten</i>	4/29/2003

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

Task Description	Date Complete
1. Facility written exam comments or graded exams received and verified complete	4/16/2003
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	N/A
3. Operating tests graded by NRC examiners	5/14/2003
4. NRC Chief examiner review of written exam and operating test grading completed	5/14/2003
5. Responsible supervisor review completed	5/14/2003
6. Management (licensing official) review completed	5/14/2003
7. License and denial letters mailed	N/A (denial)
8. Facility notified of results	5/14/2003
9. Examination report issued (refer to NRC MC 0612)	5/15/2003
10. Reference material returned after final resolution of any appeals	N/A

Tier and Group	Randomly Selected K/A	Reasons for Rejection
1-1 RO	<p>APE 015/017 A1.04 is N/A at Catawba</p> <p>Replaced with K2.10</p>	<p>Replaced APE 015/017 A1.04 Ability to operate and/or monitor the following as they apply to the Reactor Coolant Pump Malfunctions (Loss of RC Flow): AA1.04 RCP ventilation cooling fan run indicators (CFR 41.7 / 45.5 / 45.6) because there are no RCP cooling fans installed at Catawba.</p> <p>Randomly selected K2.10 Knowledge of the interrelations between the Reactor Coolant Pump Malfunctions (Loss of RC Flow) and the following: AK2.10 RCP indicators and controls 2.8* 2.8(CFR 41.7 / 45.7)</p>
1-2 RO	<p>APE W/E03 Replaced EK3.2 with</p> <p>EK2.02 for Rebalancing</p>	<p>Randomly replaced EK3.2 Knowledge of the reasons for the following responses as they apply to the (LOCA Cooldown and Depressurization) EK3.2 Normal, abnormal and emergency operating procedures associated with (LOCA Cooldown and Depressurization). IMPORTANCE RO 3.4 SRO 3.9 in order to randomly select a sufficient number of EK2s in sample plan for balance.</p> <p>Randomly reselected EK2.2 Knowledge of the interrelations between the (LOCA Cooldown and Depressurization) and the following: Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility. IMPORTANCE RO 3.7 SRO 4.0 for balance. There were insufficient EK2s in the original sample.</p>
2-1 RO	<p>System 003 Replaced K5.04 with</p> <p>K2.02 for Rebalancing</p>	<p>Randomly replaced K5.04 Knowledge of the operational implications of the following concepts as they apply to the RCPS: Effects of RCP shutdown on secondary parameters, such as steam pressure, steam flow, and feed flow 3.2 3.5 (CFR: 41.5 / 45.7) in order to balance sample plan for K2s.</p> <p>Randomly reselected Knowledge of bus power supplies to the following: K2.02 CCW pumps 2.5* 2.6* (CFR: 41.7) There were insufficient K2s in the initial sample.</p>

Tier and Group	Randomly Selected K/A	Reasons for Rejection
2-1 RO	System 007 Replaced A2.04 with G2.4.4 To prepare a better question	<p>Unable to write a satisfactory question on A2.04 <i>Ability to (aj) predict the impacts of the following malfunctions or operations on the P S; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.04 Overpressurization of the waste gas vent header 2.5 2.9 (CFR: 41.5 / 43.5 / 45.3 / 45.13)</i> The waste gas header is sized to prevent overpressure from the PRT. Obtained Chief Examiner's permission to replace.</p> <p>Randomly selected K/A G 2.4.4 <i>Ability to recognize abnormal indications for system operating parameters that are entry-level conditions for emergency and abnormal operating procedures. (CFR 41.10143.2 / 45.6)</i> to prepare a better question.</p>
1-1 RO	System 022 K4.05 Replaced with K2.01 Question construction	<p>Replaced K/A 4.05 <i>Knowledge of CCS design feature(s) and/or interlock(s) which provide for the following: K4.05 Containment cooling after LOCA destroys ventilation ducts 2.6* 2.7 (CFR: 41.7)</i> - Unable to construct good question.</p> <p>Randomly selected K/A A2.01 <i>Ability to (a) predict the impacts of the following malfunctions or operations on the CCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.01 Fan motor over-current 2.5 2.7 (CFR: 41.5 / 43.5 / 45.3 / 45.13)</i></p> <p>Approved by NRC Chief Examiner.</p>
1-3 RO	System 005 Replaced A4.03 with K2.01 for Rebalancing	<p>Randomly replaced A4.03 <i>Ability to manually operate and/or monitor in the control room: (CFR: 41.7 145.5 to 45.8)</i> with,</p> <p>K2.01 <i>Knowledge of bus power supplies to the following: K2.01 RHR pumps 3.0 3.2 (CFR: 41.7)</i> In order to increase the number of K2s above the minimum.</p>
1-3 RO	System 041 Replaced A2.02 with K3.02 for	<p>Randomly replaced A2.02 <i>Ability to (a) predict the impacts of the following malfunctions or operations on the SDS; and (h) based on those predictions or mitigate the consequences of those malfunctions or operations: A2.02 Steam valve stuck open (CFR: 41.5 / 43.5 145.3 145.13)</i> with,</p> <p>K3.02 <i>Knowledge of the effect that a loss or malfunction of</i></p>

