

Administrative Documents
CATAWBA OCTOBER 2004

EXAM 50-413, 414/2004-301
OCTOBER 4 - 8, 2004 &
OCTOBER 13, 2004 (WRITTEN)

- ~~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 ✓
14. SUBMITTAL LETTER FROM FACILITY DATED 8-19-2004
15. SUBMITTAL LETTER FROM FACILITY DATED 9-1-2004

Facility: <u>CATAWBA</u>		Date of Examination: <u>10/14/2004</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)	<i>g</i>
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	<i>6/2 g</i>
-120	3. Facility contact briefed on security & other requirements (C.2.c)	<i>6/2</i>
-120	4. Corporate notification letter sent (C.2.d)	<i>6/2</i>
[-90]	[5. Reference material due (C.1.e; C.3.c)]	<i>N/A</i>
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d) <i>8/21 (g)</i>	<i>8/21 g/2 AS</i>
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e) <i>8/17</i>	<i>8/17 ed AS</i>
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d) <i>8/23</i>	<i>8/23</i>
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	<i>9/04</i>
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	<i>9/20</i>
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	<i>9/20</i>
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	<i>9/20</i>
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	<i>9/27</i>
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	<i>9/27</i>
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	<i>9/27</i>
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	<i>9/27</i>

Facility: <u>CATAWBA</u>		Date of Examination: <u>10/4/04</u>		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T E N	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	BRJ	RWS	JK
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled.	BRJ	RWS	JK
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	BRJ	RWS	JK
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	BRJ	RWS	JK
2. S I M	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, and major transients.	RJK	RWS	JK
	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 on subsequent days.	RJK	RWS	JK
	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.	RJK	RWS	JK
3. W / T	a. Verify that: (1) the outline(s) contain(s) the required number of control room and in-plant tasks; (2) no more than 30% of the test material is repeated from the last NRC examination; (3)* no tasks are duplicated from the applicants' audit test(s), and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks.	RJK	RWS	JK
	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% - 6 (2 - 3 for SRO-U) of the tasks require the applicant to implement an alternate path procedure, (4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and (5) the in-plant walk-through requires the applicant to enter the RCA.	RJK	RWS	JK
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	RJK	RWS	JK
	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 subsequent days.	RJK	RWS	JK
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	RJK	RWS	JK
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	RJK	RWS	JK
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	RJK	RWS	JK
	d. Check for duplication and overlap among exam sections.	RJK	RWS	JK
	e. Check the entire exam for balance of coverage.	RJK	RWS	JK
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	RJK	RWS	JK
a. Author <u>Brian Haagen</u> Printed Name / Signature <u>Ronald J. Kottwisch</u> Date <u>7-28-04</u> b. Facility Reviewer (*) <u>Robert W. Smith, Jr.</u> / <u>R. W. Smith</u> <u>7-28-04</u> c. NRC Chief Examiner (#) <u>Robert W. Smith</u> / <u>George T. Hopper</u> <u>8/6/04</u> d. NRC Supervisor <u>George T. Hopper</u> / <u>George T. Hopper</u> <u>8/6/04</u>				
Note: * Not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.				

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 10-4-04 ^{part 2} 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 10-4-04 From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. Don Cain	RO		10-27-04		10-16-04	
2. Roger Ellingwood	SPO		10-28-04		10/14/04	
3. STEVE COOPER	RO		28-SEP-04		10/14/04	
4. CHRISTOPHER LORR	SOM / SRO		10-4-04		10/14/04	
5. HARVEY A. JARMAN	RD		10/10/04		10/13/04	
6. C.T. KIKER, JR.	OPS TRG EAST		10/6/04		10/14/04	
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NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 10/11/04 to 10/14/04 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 10/11/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. RICHARD V BENNETT	SRO / EXAM DEVELOPMENT	<i>[Signature]</i>	8/9/04	<i>[Signature]</i>	10/14/04	
2. MARIE MORGAN	ADMIN	<i>[Signature]</i>	8-10-04	<i>[Signature]</i>	10-14-04	
3. David H Paul	RO / VALIDATION	<i>[Signature]</i>	08/24/04	<i>[Signature]</i>	10/13/04	
4. WALTER HUNNICUTT	SRP/Research operator/Validation	<i>[Signature]</i>	08/24/04	<i>[Signature]</i>	10-15-04	
5. Thomas A. Backs	SRO / Validation	<i>[Signature]</i>	08/24/04	<i>[Signature]</i>	10-15-04	
6. Brian D. Miller	RO / VALIDATION	<i>[Signature]</i>	08/24/04	<i>[Signature]</i>	10/15/04	
7. JAMES P. CAULIFF	SRO / VALIDATION	<i>[Signature]</i>	08/24/04	<i>[Signature]</i>	10/14/04	
8. Eric P. Moore	SRP/Validation	<i>[Signature]</i>	08/24/04	<i>[Signature]</i>	10/14/04	
9. Glenn Spurlin	Nuclear Inst	<i>[Signature]</i>	8/20/04	<i>[Signature]</i>	10/14/04	
10. Etta Meares	Admin	<i>[Signature]</i>	9-15-04	<i>[Signature]</i>	10-14-04	
11. John W. Piteas	Supt. of Operations	<i>[Signature]</i>	9/24/04	<i>[Signature]</i>	10-15-04	

NOTES:

ES-1 Examination Security Agreement Form ES-201

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 10/4/04 - 10/16/04 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 10/4/04-10/16/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. Brian Haagensen	PSHA Written Exam Author	<i>Brian Haagensen</i>	6/13/04	<i>Brian Haagensen</i>	10/16/04	
2. Paul Swetland	PSHA Written Exam Author	<i>Paul Swetland</i>	6/13/04	<i>Paul Swetland</i>	10/16/04	
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NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12/4-10/03 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

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 10/4-10/14/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. Sam A. Brooks	Simulator Engineer	<i>Sam A. Brooks</i>	6-2-04	<i>Sam A. Brooks</i>	10-14-04	
2. July A. Lander	Simulator Engineer	<i>July A. Lander</i>	6-2-04	<i>July A. Lander</i>	10/14/04	
3. RONALD J. KATAMUCHI	EXAM REVIEWER STATION MGR	<i>Ronald J. Katamuchi</i>	6-2-04	<i>Ronald J. Katamuchi</i>	10/14/04	
4. Regina L. E. Kimroy	LOR Supervisor	<i>Regina L. E. Kimroy</i>	6-2-04	<i>Regina L. E. Kimroy</i>	10/14/04	
5. Gayle L. Wood	Sim Supv.	<i>Gayle L. Wood</i>	6-3-04	<i>Gayle L. Wood</i>	10/14/04	
6. Donald Ross Cooke	Simulator Support	<i>Donald Ross Cooke</i>	6-3-04	<i>Donald Ross Cooke</i>	10-14-04	
7. JAMES K. SUPREA	INSTRUMENT SUPERVISOR	<i>James K. Suprea</i>	6-7-04	<i>James K. Suprea</i>	10/14/04	
8. TIM S. RAMSEY	Nuclear Instructor	<i>Tim S. Ramsey</i>	6/15/04	<i>Tim S. Ramsey</i>	10/14/04	
9. Gary W. Hamilton	Ops Training Mgr	<i>Gary W. Hamilton</i>	7-9-04	<i>Gary W. Hamilton</i>	10-14-04	
10. R. W. SMITH	OPS TRAINING SPEC	<i>R. W. Smith</i>	7/19/04	<i>R. W. Smith</i>	10-14-04	
11. Jack Brisson	OSG Mgr	<i>Jack Brisson</i>	8/14/04	<i>Jack Brisson</i>	10-16-04	

NOTES:

Facility: Catawba		Date of Examination: October 04, 2004 – October 15, 2004	
Examination Level: RO		Operating Test Number: 1	
Administrative Topic (see Note)	Describe activity to be performed		
Conduct of Operations	Perform a shutdown margin calculation. (Gen: 2.1.25 (2.8/3.1))		
Conduct of Operations	Calculate reactor coolant system subcooling during a loss of operator aid computer. (Gen: 2.1.23 (3.9/4.0))		
Equipment Control			
Radiation Control	Calculate Low Pressure Service Water Flow for liquid radioactive release (Gen: 2.3.11 (2.7/3.2))		
Emergency Plan	Perform emergency plan requirements for a site fire emergency (Gen: 2.4.43 (2.8/3.5))		
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.			

Bold item is the repeat from 2003.

Facility: Catawba		Date of Examination: October 04, 2004 – October 15, 2004	
Examination Level: SRO		Operating Test Number: 1	
Administrative Topic (see Note)	Describe activity to be performed		
Conduct of Operations	Verify unit shutdown margin status and evaluate the results. GEN: 2.1.25 (2.8/3.1)		
Conduct of Operations	Determine the availability of operators to meet proper staffing levels. Gen: 2.1.4 (2.3/3.4)		
Equipment Control	Evaluate a request to perform maintenance during an outage period. Gen: 2.2.18 (2.3/3.6)		
Radiation Control	Calculate Low Pressure Service Water Flow for liquid radioactive release. Gen: 2.3.11 (2.7/3.2)		
Emergency Plan	Classify an event and complete a notification form. Gen: 2.4.30 (2.2/3.6)		
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.			

Bold item is the repeat from 2003.

Facility: Catawba		Date of Examination: Oct 04 – Oct 15, 2004	
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. Perform Enclosure 6 of ES-3.2 (SGTR Cooldown Using Blowdown)	D, S	3	
b. Align NS system for Cold Leg Recirculation	D, A, S	5	
c. Restore power to blackout buss 1FTA from 1ETA	N, A, S, L	6	
d. Place standby Component Cooling train in service	M, S	8	
e. Increase Cold Leg Accumulator 1D Level	N, S	2	
f. Restore adequate Nuclear Service Water flow	D, S	4(PRI)	
g. Respond to a loss of UST level	N, A, S, L	4(Sec)	
h. Realign a control rod	M, A, S	1	
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i. Restore power to 2ERPB using swing inverter 2EIF	N	6	
j. Borate the reactor coolant system from outside the control room.	D, R	8	
k. Start a Main Vacuum Pump	D	4(Sec)	
* 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			

Bold items are from the 2003 NRC exam at Catawba.

Facility: Catawba		Date of Examination: Oct 04 – Oct 15, 2004	
Exam Level (circle one): RO / <u>SRO(I)</u> / 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.			
b. Align NS system for Cold Leg Recirculation	D, A, S	5	
c. Restore power to blackout buss 1FTA from 1ETA	N, A, S, L	6	
d. Place standby Component Cooling train in service	M, S	8	
e. Increase Cold Leg Accumulator 1D Level	N, S	2	
f. Restore adequate Nuclear Service Water flow	D, S	4(PRI)	
g. Respond to a loss of UST level	N, A, S, L	4(Sec)	
h. Realign a control rod	M, A, S	1	
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i. Restore power to 2ERPB using swing inverter 2EIF	N	6	
j. Borate the reactor coolant system from outside the control room.	D, R	8	
k. Start a Main Vacuum Pump	D	4(Sec)	
* 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			

Bold items are from the 2003 NRC exam at Catawba.

Facility: Catawba		Date of Examination: Oct 04 – Oct 15, 2004	
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.			
b. Align NS system for Cold Leg Recirculation	D, A, S	5	
c.			
d.			
e.			
f.			
g. Respond to a loss of UST level	N, A, S, L	4(Sec)	
h. Realign a control rod	M, A, S	1	
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i. Restore power to 2ERPB using swing inverter 2EIF	N	6	
j. Borate the reactor coolant system from outside the control room.	D, R	8	
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			

Bold items are from the 2003 NRC exam at Catawba.

Facility: CATAWBA		Date of Examination: 10-4-04 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).	RJK	RWS	JS
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	RJK	RWS	JS
c.	The operating test shall not duplicate items from the applicants= audit test(s)(see Section D.1.a).	RJK	RWS	JS
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	RJK	RWS	JS
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	RJK	RWS	JS
2. WALK-THROUGH		a	b*	c#
a.	Each JPM includes the following, as applicable: ≡ initial conditions ≡ initiating cues ≡ references and tools, including associated procedures ≡ reasonable and 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: - 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	RJK	RWS	JS
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.	RJK	RWS	JS
c.	At least 20 percent of the JPMs on each test are new or significantly modified.	RJK	RWS	JS
3. SIMULATOR CRITERIA		a	b*	c#
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	RJK	RWS	JS
Printed Name / Signature a. Author <u>RONALD J KATALINICH</u> <i>[Signature]</i> Date <u>8/20/04</u> b. Facility Reviewer(*) <u>ROBERT W SMITH</u> <i>[Signature]</i> <u>8/20/04</u> c. NRC Chief Examiner (#) <u>GERARD W. LASCA</u> <i>[Signature]</i> <u>8/24/04</u> d. NRC Supervisor <u>G.T. HOPKINS</u> <i>[Signature]</i> <u>9/21/04</u>				
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column ac;# chief examiner concurrence required.				

Facility: CATAWBA		Date of Exam: 10-4-04	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.	RJK	RWS	[Signature]	
2.	The scenarios consist mostly of related events.	RJK	RWS	[Signature]	
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)	RJK	RWS	[Signature]	
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.	RJK	RWS	[Signature]	
5.	The events are valid with regard to physics and thermodynamics.	RJK	RWS	[Signature]	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	RJK	RWS	[Signature]	
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.	RJK	RWS	[Signature]	
8.	The simulator modeling is not altered.	RJK	RWS	[Signature]	
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.	RJK	RWS	[Signature]	
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.	RJK	RWS	[Signature]	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	RJK	RWS	[Signature]	
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).	RJK	RWS	[Signature]	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	RJK	RWS	[Signature]	
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d)		Actual Attributes	--	--	--
1.	Total malfunctions (5-8)	7, 8, 8	RJK	RWS	[Signature]
2.	Malfunctions after EOP entry (1-2)	2, 2, 1	RJK	RWS	[Signature]
3.	Abnormal events (2-4)	2, 4, 4	RJK	RWS	[Signature]
4.	Major transients (1-2)	1, 1, 1	RJK	RWS	[Signature]
5.	EOPs entered/requiring substantive actions (1-2)	2, 1, 2	RJK	RWS	[Signature]
6.	EOP contingencies requiring substantive actions (0-2)	1, 0, 1	RJK	RWS	[Signature]
7.	Critical tasks (2-3)	2, 3, 2	RJK	RWS	[Signature]

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	5						
	Normal	1*	2								
	Instrument/Component	4*	4, 6	3, 5	2, 3	1, 4, 6	1, 2, 6	3, 4, 5			
	Major	1	7	7	7	7	7	7			
As RO	Reactivity	1*			5						
	Normal	0	2								
	Instrument/Component	2*	4, 6		2, 3		1, 2, 6				
	Major	1	7		7		7				
As SRO	Reactivity	0	1		5						
	Normal	1*	2								
	Instrument/Component	2*	3, 4, 5, 6		1, 2, 3, 4, 6		1, 2, 3, 4, 5, 6				
	Major	1	7		7		7				
SRO-U	Reactivity	0	1		5						
	Normal	1*	2								
	Instrument/Component	2*	3, 4, 5, 6		1, 2, 3, 4, 6		1, 2, 3, 4, 5, 6				
	Major	1	7		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.5.d) but must be significant per Section C.2.a of Appendix D. * Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a one-for-one basis.
 - (3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Chief Examiner:

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

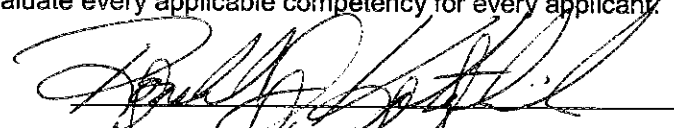
Notes:

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

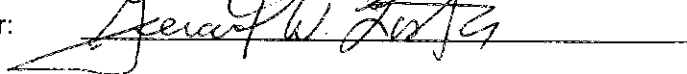
Instructions:

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:



Chief Examiner:



Facility: Catawba Nuclear Station		Date of Exam: 10/13/2004		Exam Level: RO		
Item Description	Initial					
	a	b*	c*			
1. Questions and answers technically accurate and applicable to facility	BCH	RWS	AS			
2. a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	BCH	RWS	AS			
3. SRO questions are appropriate per Section D.2.d of ES-401	NA	NA	NA			
4. Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process	BCH	RWS	AS			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: 1. ___ the audit exam was systematically and randomly developed; or 2. ___ the audit exam was completed before the license exam was started; or 3. <input checked="" type="checkbox"/> the examinations were developed independently; or 4. ___ the licensee certifies that there is no duplication; or 5. ___ other (explain)	BCH	RWS	AS			
6. Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual RO / SRO-only question distribution(s) at right	Bank 18 / 24%	Modified 14 / 19%	New 43 / 57%	BCH	RWS	AS
7. Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right	Memory 34 / 55%	C/A 41 / 45%		BCH	RWS	AS
8. References/handouts provided do not give away answers	BCH	RWS	AS			
9. Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the Tier to which they are assigned; deviations are justified	BCH	RWS	AS			
10. Question psychometric quality and format meet ES, Appendix B, guidelines	BCH	RWS	AS			
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet	BCH	RWS	AS			
Printed Name / Signature			Date			
a. Author	Brian C. Haagensen / <i>Brian C. Haagensen</i>				10/1/04	
b. Facility Reviewer (*)	R. W. Smith Jr. / <i>R. W. Smith Jr.</i>				10/1/04	
c. NRC Chief Examiner (#)	GERALD W. GASTA / <i>Gerald W. Gasta</i>				10/12/04	
d. NRC Regional Supervisor	James H. Modrow / <i>James H. Modrow</i>				10-12-04	
Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.						

Facility: Catawba Nuclear Station				Date of Exam: 10/13/2004		Exam Level: SRO	
Item Description	Initial			a	b*	c#	
	a	b*	c#				
1. Questions and answers technically accurate and applicable to facility	BCE	JWP	JWP				
2. a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	BCE	JWP	JWP				
3. SRO questions are appropriate per Section D.2.d of ES-401	BCE	JWP	JWP				
4. Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process	BCE	JWP	JWP				
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: 6. ___ the audit exam was systematically and randomly developed; or 7. ___ the audit exam was completed before the license exam was started; or 8. <input checked="" type="checkbox"/> the examinations were developed independently; or 9. ___ the licensee certifies that there is no duplication; or 10. ___ other (explain)	BCE	JWP	JWP				
6. Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual RO / SRO-only question distribution(s) at right	Bank	Modified	New	BCE	JWP	JWP	
	3 / 12%	6 / 24%	16 / 64%				
7. Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right	Memory	C/A		BCE	JWP	JWP	
	9 / 36%	16 / 64%					
8. References/handouts provided do not give away answers	BCE	JWP	JWP				
9. Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the Tier to which they are assigned; deviations are justified	BCE	JWP	JWP				
10. Question psychometric quality and format meet ES, Appendix B, guidelines	BCE	JWP	JWP				
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet	BCE	JWP	JWP				
Printed Name / Signature				Date			
a. Author	Brian C. Haagensen / <i>Brian C. Haagensen</i>			9/29/04			
b. Facility Reviewer (*)	John Suptela / <i>John W. Pitsco</i>			10-1-04			
c. NRC Chief Examiner (#)	Gerry Laska / <i>Gerry Laska</i>			10/12/04			
d. NRC Regional Supervisor	Jana H. Morrison / <i>Jana H. Morrison</i>			10-12-04			
Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.							

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial Link	Job- Link	Minutia #/ units	Back- ward	Q= K/A	
Instructions												
[Refer to Section D of ES-401 and 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. . One or more 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).											
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.	Check questions that are <u>sampl</u> ed for conformance with the approved K/A and those that are <u>designated SRO-only</u> (K/A and license level mismatches are unacceptable).											
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?											
7.	At a minimum, explain any "U" ratings (e.g., 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. Other	6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units				Backward	Q=
RO/SRO Combined Question															
1	F	2				X								E	Question 033 K/A 034A1.02 Distractor A may not be plausible, What seals could be inflated? On Catawba 2000 License Exam. <u>BANK Add IAW With a Procedure. Insure distractor A is not correct</u> <u>Made Changes as requested. 9/29 SAT</u>
2	H	2				X								E	Question 059.1 K/A 075A2.02 Need to state assume no operator actions have been taken yet. B and C distractors may not be plausible. modified However the answer is still the same. Change distractor B and C for prime start, and then manually open valve. <u>Changed B and C to manually open the valves 9/29 SAT (did not add no operator actions have been taken yet)</u>
3	H	2												S	Question 124.2 Missing from RO Exam . Question is in the Answer Key section. K/A 2.3.2 Need to add ..and not require a dose extension for any individual. modified Distractors state that B is the correct answer, however the answer at the top of the question is C in order to be modified the answer should change. No Change needed <u>Changed stem to state that Not to exceed the Duke Power Alert flag limit SAT 9/29</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation			
			Stern Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minuta	#/units				Back-ward	Q=K/A	SRO Only
4	H	2													U	Question 272.1 K/A 028K4.08 Distractor A does not appear to be plausible. If the B NS pump did not receive an activation signal in the first place why would it start now? Needs some work. Which is correct 2MS18A or 2MS-10A both are used in the question we need to use only one of these. This could confuse the applicant. modified Although some conditions changed in the Stem, the correct answer did not change. Should be considered a BANK question. Revise A and B or replace question. Totally revised question.
5	F	1.5													S	Question 282.3 K/A 078A3.01 modified Very simple question.
6	H	2													S	Question 311.1 K/A 008AA1.08 (Not really an accident) BANK
7	H	1						X							E	Question 362.1 K/A 058AK1.01 Distractors A and D not plausible. Also, answer C is a subset of B. As written this question would be a 1 BANK To be replaced. Replaced Question (9/29). Very simple but SAT
8	F	2													S	Question 471 K/A G.24.5 (Very Simple) BANK
9	H	2													S	Question 495 K/A 013A4.02. Question answer page states that D is the correct answer, however the distractor analysis states that all answers are incorrect. It appears that answer C is correct. BANK c is correct. Question is SAT

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		
10	H	2											X		U	Question 497 K/A 056AG2.1.23 Loss of off site power, ability to perform system specific and integrated plant procedures during all modes of operation. This is a Technical specification question and does not appear to match the K/A. BANK Replace	
																Replaced Question SAT (9/29).	
11	H	2														U	Question 526.1 K/A G2.1.7 Questions as written with references provided is a direct lookup. Give the COLR figure as a reference and remove the T/S reference and the question would be acceptable. Why remove N-43 from service is distractor D? N-41 appears to be the inoperable N. Change the distractors to be 100% and either hourly or every 7 days, and 85% and either hourly and seven days modified. To be looked at later
																	Changed question and basically changed the intent of the question to a very simple almost direct lookup. Need to go back more towards the original question (9/29)
																	Changed question back with the exception of distractors A and B. Changed to make distractor A the correct answer to allow the power to be in a descending order. SAT (10/01)

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 #	Backward				Q=K/A
12	F	2												Question 537 K/A 074G.2.1.27 Does not match K/A BANK (Also on Audit Exam) To BE Replaced Replaced Question SAT
13	H	2	X			X						X		Question 560 K/A G2.2.3 Distractor A (which is the correct answer) goes into more depth on several of its indications (ie median nuclear power/ NR S/G level etc) the rest of the distractors just mention S/G level. This tends to cue the applicant that A is the correct answer. Distractor D is not plausible, when is FRV s limited in position? Reasons are listed in the responses but are not asked for. Distractor C may also be subset of A. BANK Change C and D distractors to check Lo level Changed distractors C and D as requested Question is SAT (9/30)
14	F	1					X							Question 570.1 K/A 062G2.1.28 Distractors C and D do not appear to be plausible. Borderline K/A Match. modified , the correct answer really did not change. Remove Pull Cords adds IAW Procedure. Remove Pull Cords as requested SAT (9/30)
15	F	2				X								Question 587.1 K/A 022K1.01 Distractor A is not plausible, does any automatic actions/alignments occur on a Hi Hi containment temp.? BANK Change distractor A to 0.5 cfmt pressure. Made change as requested. SAT (9/30)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia #/units	Backward	O=K/A			ISRO Only
16	F	2											E	Question 601.1 K/A 011EK1.01 May need to add Major cooling flow path during... BANK Added to Stem Made change as requested. SAT (9/30)
17	H	2					X						E	Question 642.1 K/A 033A1.01 Need to make sure that the C distractor is incorrect. A loss of AC may not cause these valve (s) to fail open. But could it allow them to stay open if they were? modified. Revise C to be wrong Made changes to make C more wrong, changed distractor C to say that fuel level dropped from 11 to 10.5% is this reasonable using the DAC this is reasonable SAT (9/30)
18	H	2				X			X				U	Question 653.1 K/A 073A2.02 Although this is not a direct lookup, providing the SLC reference makes both Band D distractors not plausible. Either change the distractors, or remove the reference. (Is this required for an RO?) BANK Replace Question Replaced Question SAT (9/30)
19	F	2											S	Question 670.1 K/A 055G2.1.32
20	F	2									X		U	Question 725 K/A 004K6.04 Does not match the K/A. There is no Effect of the loss or malfunction. This is really a power supply question. From Catawba 2000 NRC Exam BANK Replace Question Replaced Question SAT (9/30)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				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		
21	F	2											X		U	Question 741 K/A 026K3.02 Does not match the K/A. There is no Effect of the loss or malfunction. This question asks for interlocks. 2000 NRC Exam BANK. Work on change to propose Changed stem and distractors A and B SAT (9/30)	
22	F	2													X	U	Question 746.1 K/A 064A2.07 Does not match K/A there is no malfunction. Also teaching in stem. Distractor C is not credible. 2001 Catawba NRC Exam BANK. Replace Changed question (stem and distractors to include procedures). Is B really a correct answer (reverse power trip due to voltage being set too low)?(9/30) Totally revised question to match K/A better SAT (10/1)
23	F	2														E	Question 767.1 K/A 028K1.01 May have teaching in stem. Is there any time than Air is normally vented from containment without going through the Annulus? Catawba 2000 NRC Exam BANK Change the 3.5 % Made Changes as requested. SAT (9/30)
24	H	2														S	Question 791.1 K/A 040AK2.01 2000 NRC Exam BANK (Also on Audit Exam) Replace Question Replaced Question very simple SAT (9/30)

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
25	H	2												S	Question 800.1 K/A 024AK2.01. Question is sat, responses could be reduced to just X gpm to reduce amount of reading required. modified However the answer remained the same so it is actually BANK Also on Audit Exam SRO # 82 Replace Question Replaced question SAT (9/30)
26	F	2					X							E	Question 805.1 K/A 022K4.04 Matches K/A, Distractor C could also be considered correct. IAW some procedure? Modified Question # 805 Answer is the same as the original question this makes this question a BANK Put times (list) to ... Restructured Question SAT (9/30)
27	F	1					X						X	U	Question 806.1 K/A 022K4.04 Does not match K/A, and is very simple. Distractors A and B are not credible. Bank (Also on Audit Exam) Replace Modified three distractors and conditions in the stem SAT (9/30)
28	H	2	X										B	E	Question 816.1 K/A 061K6.01 Teaching in Stem. K/A borderline. Bank Change Stem to remove Both MDAFEW pumps start. (9/21) Changed stem to read that both MDCA pumps operated as designed SAT (9/30)
29	H	2												S	Question 830.1 K/A G2.1.32 Modified Question 830 Answer is really the same except for the reason. That would make this question a BANK (9/21)
30	H	2												S	Question 870.1 K/A 002K6.07 Modified Question 870

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
31	H	2	X										U	Question 887.2 K/A G2.2.34 Question is basically an admin JPM. Too Much reference material provided. Need to ask the question in a different way where so much reference material is not required. Modified Question 887 Replace Question Replaced question. Need to know if the critical positions are greater than the RILs. Otherwise SAT. (9/30)
32	H	2											E	Question 912.1 K/A W/E04 EK2.2. Procedure gives too much information and may answer other questions. Restate the stem to include "At the step to determine NC submitting. Applicants will be given enclosure 5.BANK change the stem to always <u>will</u> allow reference if it does not answer any other questions. Made changes as requested, but also changed NY pump gov. why Changed all distractors to state Minimum flow required, and returned NY pump flow back to original value. SAT (10/07)
33	F	2											S	Question 926 K/A 033AA1.02. BANK
34	F	2				X		X					U	Question 945 K/A029EK1.01 Distractor C is not plausible and distractor D could be correct. BANK Question to be changed to fix distractor. Made changes as requested SAT (9/30)
35	F	2											S	Question 1136 K/A007EA2.02 NEW

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
36	H	2													Question 1137 K/A 05AA2.04 NEW Very Similar to # 36 on the Audit Exam. Need to be Replaced Question replaced, need to make sure distractor D is not correct otherwise SAT(9/30) (discussed with licensee on 9/30 sat)
37	H	2													Question 1138 K/A 065AK3.08 K/A is for a loss of instrument air. This question does not have a loss of instrument air in it, although the reasons in the responses are based on a loss of instrument air. NEW Change Question to incorporate a loss of instrument air causing a loss of heat sink. Made changes as requested SAT (9/30)
38	F	2				X									Question 1139 K/A WE05EA2.2 Distractors A and B are not credible (the question states quickly... 30 minutes is not quickly). Why not use the 8 minutes stated in the distractor analysis? NEW Change to use 8 minutes. Made changes as requested SAT (9/30)
39	F	2													Question 1140 K/A 022AK3.02 NEW Changed part of the stem to clarify SAT (9/30)
40	H	2													Question 1141 K/A 026AK3.02 NEW
41	H	2													Question 1142 K/A 027AK1.01 Question is SAT, but reference ARP1AD-6 is not required to answer the question. Steam tables should be enough reference. NEW Remove Reference Removed ARP reference Question SAT (9/30)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stern Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia #/units	Backward	Q=K/A			SRO Only
42	F	2											S	Question 1144 K/A 005AK1.04 NEW
43	H	2											S	Question 1146 K/A 032AA2.05 NEW <i>Changed distractors based on comments from validation. These changes make the question much easier. Change A and C distractors to state that A-6 or A-10 has not reset. Otherwise SAT (9/30)</i> <i>Made additional changes to distractor A and C to be more like terminology used in procedures. SAT (10/01)</i>
44	H	2											S	Question 1147 K/A 051AK1.01 NEW (is 40 gpm a good value for these radiation monitor readings) <i>Change to 10 gpm</i> <i>Changed rad monitors and units WHY? Also changed gpm as requested (9/30)</i> <i>Changed question Back to Unit 2 SAT (10/01)</i>
45	F	2								X		X	U	Question 1148 K/A WE13EK3.3 NEW It appears that all the distractors are correct (or NOT correct). <u>Replace</u> Replaced Question SAT (9/30)

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
46	H	3													<p>Question 1149 K/A WE08EA2.1 NEW (Can NCS temperature get this low with only one SFG faulted?) Add a second faulted SFG.</p> <p>Failed a second generator but with page numbers on the top of the pages or FO the operators do not have to determine priority. Need to work some more on this bias. (9/30)</p> <p>Removed the reference from the question and changed distractors C and D to read either P 1 or Z 1. SAT (10/1)</p>
47	F	2												S	Question 1150 K/A 079G2.1.30 NEW
48	F	2												S	Question 1154 K/A 071A4.05 NEW
49	H	3							X					U	Question 1155 K/A G2.2.24 This appears to be an SRO level question. I would not expect an RO to have to answer this. With the reference provided it is very close to a direct lookup. NEW Replace Question
50	H	2												U	<p>Question Replaced SAT (9/30)</p> <p>Question 1156 K/A G2.3.4 Very Similar to question to question # 3 (124.2) NEW ? Going to change # 3.</p> <p>Question Replaced SAT (9/30)</p>
51	F	2						X		X				E	<p>Question 1157 K/A G2.4.1 Discriminating Value? The question sort of matches the K/A, but gets there through backwards logic. Why is answer B wrong? NEW Change Frozen to failed to open.</p> <p>Changed out entire question why? Replacement question is SAT (9/30)</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward				Q=K/A	SRO Only
52	F	2				X									U	Question 1158 K/A G2.4.35 Distractors C and D not plausible. May want to add correct location in stem? NEW Okay as written usually isolate CAPT from two sources. SAT (9/21)
53	H	2											X		U	Question 1159 K/A 045K5.18 Not really testing the purpose of the low power trips, the same purpose is in all answers. NEW Change modes and ADD DNB. Made changes as requested. SAT (9/30)
54	F	1													U	Question 1160 K/A 103A1.01 If Technical Specifications are included as reference this would not have any discriminating value. This is a very simple question without the reference. (Technical specification entry conditions). NEW Ensure that the tech specs do not answer other questions SAT (9/30)
55	H	2				X									U	Question 1161 K/A 033K3.02 Distractors A and C are not credible. NEW Get back with loads Staff did not show that load came off ZEPH (9/30) Replaced Question with New Question (SAT 11691)
56	F	2													S	Question 1162.1K/A 035A3.02 NEW

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
57	F	2												Question 1164 K/A 061K2.01 3f in the lesson material states that the flow control valves will fail to full open on a CA auto start. The correct answer states that the control valves will not open. Need to ensure that the answer is correct. NEW Not an Auto start. The valves will stay closed. Question Okay.
58	H	5												Question SAT (9/30) Question 1165 K/A 012K3.02 NEW Changed Post Test. Why otherwise SAT (9/30)
59	F	2												Question 1167 K/A 005K4.02 BANK Very Simple. Change distractor C to ECCS has not been reset. Change to ECCS has not been reset Made changes as requested. SAT (9/30)
60	F	2												Question 1168 K/A 006K3.03 NEW
61	F	2												Question 1169 K/A007K5.02 NEW
62	H	2		X				X						Question 1170 K/A 008K3.03 NEW Teaching in A and B distractors. Distractors C and D are not plausible. Change to seal cooling is being maintained Made changes as requested. SAT (9/30)
63	H	3												Question 1171 K/A 010A4.01 NEW
64	H	2												Question 1173 K/A 059K1.05 NEW

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward			Q=K/A	SRO Only
66	H	2													Question 1174 K/A 059K1.05 NEW Based on further review no right answer Question to be replaced. Question was rewritten. Explain again why the first question was wrong. Replaced question with a new question SAT (10/01).
66	F	2		X											Question 1175 K/A 059K1.05 Teaching in stem. Restate stem to say "NGOTF protective interlocks prevents an inadvertent start of the containment air return fans?" NEW will remove first statement and ONE. Did not remove first part of stem which is teaching. Remove the first part and the question will be set. (9/30) First part removed SAT (10/01)
67	H	2						X							Question 1176 K/A 038EA1.02 Stem states that a tube rupture occurs and also states that 1C S/G has a leak. Need to fix. Also need to add prior to any power reduction. If power is reduced steam flow will decrease making D a correct answer. NEW will get rid of SGTR. Made requested changes SAT (9/30)
68	H	2													Question 1178 K/A 076A1.02 NEW

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		
69	H	2										S	Question 1179 K/A 010K1.06 NEW Added 1NV-309 is in auto and changed pressurizer pressure to ensure back up heaters would be on. SAT (9/30)
70	H	2										U	Question 1180 K/A 029K1.04 Are you sure about the correct answer? May not be enough information to answer this question. NEW Adds in Manual C/A correct answer. Made changes as requested, this makes C the correct answer. Also added that the steam leak could not be isolated. SAT (9/30)
71	H	2										S	Question 1181 K/A 028K1.02 NEW Changed NC pressure in the 2nd bullet. WHY? Changed NC pressure
72	F	2						X				U	Question 1182 K/A 068K5.03 Distractor A is also correct. BANK Change A to be trip 1 Made changes as required. SAT (9/30)
73	F	2										S	Question 1183 K/A 003G2.4.50 NEW
74	F	3										S	Question 1184 K/A 025G2.2.25 NEW
75	F	2										S	Question 1185 K/A 009EA1.07 NEW
SRO ONLY													
1	H	2										S	Question 063.1 K/A003G2.4.6 BANK (9/28)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia #/units	Backward	Q=K/A	SRO Only			
2	H	2												S	Question 093.3 K/A008AA2.16 Applicants will have Steam tables and Figures 57 and 58. Applicants do not need E-1. Question is SAT with out E-1 Modified <u>Will wait and discuss the use of reference later.</u> Changed first two bullets to eliminate the need for a procedure reference. Changed temperatures to better align subcooling values. Figures 57 and 58 and steam tables allowed as reference. SAT (9/28)
3	H	1		X										U	Question 121.2 K/AG2.1.5 This Question was on the 2000 Catawba NRC Exam. It has not been changed or modified at all. This question can not be used with a reference given, it makes the question a 1 on level of difficulty. BANK Overlap with Admin JPM Question Replaced New question asks for administrative requirements that must be met, however there are none. (9/28)
4	H	1												U	Question 233.3 K/A 033AA2.04 With a reference provided this question would be a 1 on LOD. Modified Discuss with management later Removed times from the distractors, no reference required Question is SAT (9/28)
5	F	2											X	U	Question 433.1 K/A 038G2.4.4 Not SRO only. Basically a system question. BANK Replace Question Question replaced, however entry level procedures are not SRO only. Add procedure flow path to second part of stem. (9/28)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia #/units	Backward	Q=K/A	SRO Only				
6	H	1											B		U	Question 453.3 K/A G2.4.31 Used on 2003 Catawba NRC Exam This question as written would be a 1. The K/A match is borderline (The applicant should be using alarms/indications to determine the procedure and correct response. This question already places the applicant in a procedure. BANK Pick a New K/A New Question Written to K/A G2.4.27 SAT (9/28)
7	H	3											X		U	Question 491.1 K/A G2.4.40 Used on 2003 Catawba NRC Exam. While making a classification and PARs is a duty of the SRO in the emergency plan, the K/A is looking for what are his duties. This is more in line with a Admin JPM. Suggest New question. BANK Change conditions from 2003 question. Replacement question received but two distractors are not plausible C and D.(9/28)
8	H	2													E	Question 571.3 K/A WE03G2.1.32 refilling the pressurizer? Are we sure about the reason. It does not seem to match the WOG background document. Modified Will Fix question addressing the distractors. Reason corrected Question is SAT (9/28)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia #/units	Backward	Q=K/A			SRO Only	
9	H	2						X						U	Question 618.2 K/A WE09EK2.2 Background document provided states that plants with limited condensate storage and no CRDM fans running should go to ES-0.3 nothing in the background states that a transition to 0.3 is required based only on CRDM fans not running. Therefore answer B could also be correct. Need to resolve. (Put in low condensate storage or something) Modified. The only reference should be the figures. <u>Look at bases and see what drives the crew to ES-0.3.</u> Added Condensate inventory is extremely limited, but the answer changed from the Original with no apparent reason. Discussed with Licensee, licensee to attempt to get back to the original question (subcooled/superheated) (9/28)
10	H	2												S	Question 705.2 K/A G2.1.12 Explain why B is not a correct answer. The distractor analysis does not make sense. Modified Did not have original question in folder. B is correct answer. Question SAT
11	H	2												S	Question 1143 K/A 040G2.1.32 Question is sat without a reference, with a reference this is a direct look up. Modified Page 20 of P.1 is allowed for reference. Question is SAT (9/28)
12	F	2						X						U	Question 1172 K/A 007G2.4.6 A also appears to be a correct answer. Why is it wrong. NEW Fix Distractor A to not be a subset of C. Changed Distractors A and B question SAT (9/28)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia #/units	Backward			Q= K/A
13	H	2										S	Question 1186 K/A029EA2.04 Add IAW FR-S.1 NEW Added IAW S.1, but changed some things from the original question Returned RCS pressure to greater than 2335 psig. Add Normal operating pressure amps to all distractors SAT(9/28)
14	H	2				X						U	Question 1187 K/A WE04G2.2.25 Distractors B and C are not plausible. NEW Change distractors B and C. Changed Distractors B and C and some items in the stem appears to be SAT (9/28)
15	F	2										S	Question 1188 K/A 036G2.4.4 Some of the steps in the procedure use the word Ensure. We should have the terms in the question the same as the procedure. (Manual vrs Ensure vrs verify) discuss. NEW Okay SAT NO changes needed.
16	H	2										S	Question 1189 K/A 064A2.14 NEW
17	F	2										S	Question 1190 K/A 062G2.4.30 NEW Question is sat with no references. (Classification similar to SRO ADMIN - 5) Discuss with management the use of reference. Changed classification to be an emergency classification but are still desire the reference to be included. NRC wrote new question that will allow the use of a reference (9/28)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward			Q=K/A	SRO Only
18	H	2				X								U	Question 1191 K/A078A2.01 Distractor s do not appear to be plausible with air pressure continuing to drop for 20 minutes. (This makes D answer very easy to pick out) Change some of the other distractors to be more plausible. NEW 50 Psi and continues to decrease Made Changes as requested. SAT (9/28)
19	H	2												S	Question 1192 K/A 015A2.03 Does not totally meet the K/A, but is a very good attempt. Will leave question intact. The only question that arises is will the plant allow operation to continue in this configuration? NEW Get Back with me on these conditions. Changed power level to a level that will allow continued operation. SAT. (9/28)
20	H	2				X								E	Question 1193 K/A 035A2.04 Distractor A is not plausible NEW Fix distractor A. Changed distractor A. Question is SAT (9/28)
21	F	2					X							E	Question 1194 K/A 065G2.2.8 Good attempt at matching K/A Need to make sure that some of the other distractors are not 50.59 changes. Just because an item is not in T/S doesn't mean a 50.59 is not applicable. Typing error in distractor A (moving a section). NEW Changed distractor A to repair typo and ensure that a 50.59 is not required. SAT (9/28)

Facility: <u>CATAWBA</u>		Date of Exam: <u>10/3/04</u>		Exam Level: RO/ <u>SRO</u>	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	<i>BJ</i>	<i>JWS</i>	<i>JWS</i>		
2. Answer key changes and question deletions justified and documented	<i>BJ</i>	<i>JWS</i>	<i>JWS</i>		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<i>BJ</i>	<i>JWS</i>	<i>JWS</i>		
4. Grading for all borderline cases (80 +/- 2% overall and 70 +/- 4% on the SRO-only) reviewed in detail	<i>BJ</i>	<i>JWS</i>	<i>JWS</i>		
5. All other failing examinations checked to ensure that grades are justified	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	<i>BJ</i>	<i>JWS</i>	<i>JWS</i>		
Printed Name / Signature		Date			
a. Grader	<i>Brian C. Hargensen</i>		<i>10/15/04</i>		
b. Facility Reviewer(*)	<i>John K. Supina</i>		<i>10/19/04</i>		
c. NRC Chief Examiner (*)	<i>George W. Lasica</i>		<i>11/12/04</i>		
d. NRC Supervisor (*)	<i>James H. MacCormack</i>		<i>12.13.04</i>		
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

Facility: <u>CATAWBA</u>		Date of Exam: <u>10/13/04</u>		Exam Level: <u>RO/SRO</u>	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	<i>BA</i>	<i>JKS</i>	<i>JKS</i>		
2. Answer key changes and question deletions justified and documented	<i>BA</i>	<i>JKS</i>	<i>JKS</i>		
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5. All other failing examinations checked to ensure that grades are justified	N/A	N/A	<i>JKS</i>		
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Printed Name / Signature		Date			
a. Grader	<i>Brian C. Hragensen</i>		<i>10/15/04</i>		
b. Facility Reviewer(*)	<i>John K. Suptea</i>		<i>10/19/04</i>		
c. NRC Chief Examiner (*)	<i>Gregory W. Latta</i>		<i>11/2/04</i>		
d. NRC Supervisor (*)	<i>James H. McCaman</i>		<i>12.15.04</i>		
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

August 19, 2004

Mr. Gerry Laska
US Nuclear Regulatory Commission Region II
Sam Nunn Atlanta Federal Center
61 Forsythe Street, S. W., Suite 23T85
Atlanta, Georgia 30303

Subject: Duke Energy Corporation
Catawba Nuclear Station, Unit 1 and 2
Docket No.: 50-413 and 50-414
Reactor and Senior Reactor Operator Initial Examinations

Enclosed for your review is the 45-day submittal for the Catawba initial license examination scheduled to begin on October 4, 2004.

- a. ES 301-1 form for Reactor Operator Admin JPMs
- b. ES 301-1 form for Senior Reactor Operator Admin JPMs
- c. Eight (8) Administrative JPMs
- d. ES 301-2 form for Reactor Operator JPMs
- e. ES 301-2 form for Instant Senior Reactor Operator JPMs
- f. ES 301-2 form for Upgrade Senior Reactor Operator JPMs
- g. Eleven (11) Systems JPMs
- h. ES-D-1 forms for three simulator scenarios
- i. ES-D-2 forms for three simulator scenarios
- j. ES 201-2 Examination Outline Quality Checklist
- k. ES 301-3 Operating Test Quality Checklist
- l. ES 301-4 Simulator Scenario Quality Checklist
- m. ES 301-5 Transient and Event Checklist
- n. ES 301-6 Competencies Checklist
- o. ES 401-2 Reactor Operator/Senior Reactor Operator Examination Outline
- p. ES 401-3 Reactor Operator Generic Knowledge and Abilities Outline
- q. ES 401-3 Senior Reactor Operator Generic Knowledge and Abilities Outline
- r. Sampling Plan Methodology
- s. ES 401-4 Record of Rejected K/As
- t. Seventy-five (75) RO-level written exam questions and associated exam reference handout

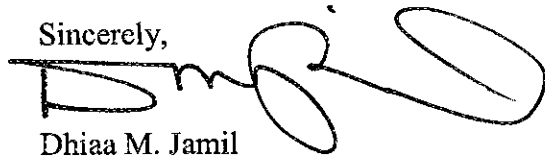
This submittal does not include the twenty-five (25) SRO-level questions. These will be submitted by September 7, 2004.

Any JPMs denoted by bold print were used on the last NRC examination administered at Catawba in 2003.

The enclosed compact disk is an updated copy of all appropriate reference materials. Please discard the compact disk that was mailed with the 75-day letter. Additional references will be supplied upon request. Specific references for written examination questions are provided with the individual questions.

If you have any questions, please contact Ronald Katalinich (Lead Instructor) at 803-831-3126 (office) or 803-831-3055 (Exam Development Facility) or John Suptela (Initial Training Supervisor) at 803-831-5123.

Sincerely,



Dhiaa M. Jamil

RJK/ken

xc: without attachments

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555-001

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E. F. Guthrie, Senior Resident
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J. K. Suptela CT01A
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G. W. Hamilton CT01A
R. A. Lindsay CT01A
L. A. Keller CN01RC
K. E. Nicholson CN01RC
Date File CN01RC
ELL EC050
CN-940.00 CN04DM

September 1, 2004

Mr. Gerry Laska
US Nuclear Regulatory Commission Region II
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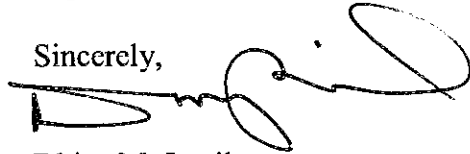
Subject: Duke Energy Corporation
Catawba Nuclear Station, Unit 1 and 2
Docket No.: 50-413 and 50-414
Reactor and Senior Reactor Operator Initial Examinations

Per our discussions, please find attached the 2004 Catawba Nuclear Station Senior Reactor Operator (SRO) written examination submittal. The following documents are included for review:

- a. ES-401-2 PWR Examination Outline (SRO)
- b. ES-401-3 Generic K/As Outline (SRO)
- c. ES 401-4 Record of Rejected K/As
- d. SRO Written Exam Notebook
 1. Written Exam
 2. Answer Key
 3. Reference Package
- e. Written Exam Question folders
- f. CD-ROM (SRO Written Exam)
- g. ES 401-6 Written Exam QA Checklist
- h. ES 401-8 Site-Specific SRO Written Exam Cover Sheet

If you have any questions, please contact Ronald Katalinich at (803) 831-3126 or John Suptela at (803) 831-5123.

Sincerely,



Dhiaa M. Jamil

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E. F. Guthrie, Senior Resident
Catawba – CN01NC

bxc: without attachments
J. K. Suptela CT01A
R. J. Katalinich CT01A
G. W. Hamilton CT01A
R. A. Lindsay CT01A
L. A. Keller CN01RC
K. E. Nicholson CN01RC
Date File CN01RC
ELL EC050
CN-940.00 CN04DM