COVER SHEET

-- ADMINISTRATIVE DOCUMENTS --
ALL IN ONE ADAMS DOCUMENT

HARRIS EXAM 2000-301

DECEMBER 11 - 15, 2000

[ ] ES-201-1 - Exam Preparation Checklist

[ ] ES-201-2 - Exam Outline Quality Checklist

[ ] ES-201-3 - Exam Security Agreements

[ ] ES-301-3 - Operating Test Quality Checklist

[ ] ES-301-4 - Simulator Scenario Quality Checklist

[ ] ES-301-5 - Transient & Event Checklist

[ ] ES-301-6 - Competencies Checklist

[ ] ES-401-7 - Written Exam Quality Checklist

[ ] ES-401-9 - Written Exam Review Worksheet

[ ] ES-403-1 - Written Exam Grading Quality Checklist

[ ] ES-501-1 - Post Exam Check Sheet

CP&L

Carolina Power & Light Company
Harris Nuclear Plant
PO Box 165
New Hill NC 27562

SERIAL: HNP-00-159

OCT 2 6 2000

Mr. Michael E. Ernstes, Region II
United States Nuclear Regulatory Commission
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303-8931

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REACTOR OPERATOR AND SENIOR REACTOR OPERATOR
INITIAL EXAMINATIONS 50-400/2000-301

Dear Mr. Ernstes:

Enclosed are the proposed written examinations, operating tests and supporting reference materials for the Reactor and Senior Reactor Operator Initial Examinations to be given at the Harris Nuclear Plant the week of December 11, 2000. This submittal complies with the requirement identified in the NRC's July 18, 2000 correspondence to furnish these materials by October 27, 2000.

The enclosed materials shall be withheld from public disclosure until after the examinations are complete.

Questions regarding these materials may be referred to Mr. Terry Toler at (919) 362-3493 or to me at (919) 362-3313.

Sincerely,

Andy T. Barbee
Superintendent Operations Training
Harris Nuclear Plant

MGW

c: Mr. J. B. Brady (NRC Senior Resident Inspector, HNP) w/o Enclosure
Mr. Rich Laufer (NRR Project Manager, HNP) w/o Enclosure
Mr. L. A. Reyes (NRC Regional Administrator, Region II) w/o Enclosure

Facility: Harris Nuclear Plant Date of Examination: December 11-15,2000

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

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

[ ] Applies only to examinations prepared by the NRC.

Facility: **SHNPP** Date of Examination: **11-DEC-00**

Item	Task Description	Initials a	Initials b	Initials c
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	wjg	ATB	psb
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all knowledge and ability categories are appropriately sampled.	wjg	ATB	psb
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	wjg	ATB	psb
	d. Assess whether the repetition from previous examination outlines is excessive.	wjg	ATB	psb
2. SIM	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.	wjg	ATB	psb
	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 scenario and scenarios will not be repeated over successive days.	wjg	ATB	psb
	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.	wjg	ATB	psb
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 the operating test is taken directly from the licensee's exam bank.	wjg	ATB	psb
	b. Verify that: (1) the tasks are distributed among the safety function groupings as specified in ES-301, (2) one task is conducted in a low-power or shutdown condition, (3) 40% of the tasks require the applicant to implement an alternate path procedure, (4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and (5) the in-plant walk-through requires the applicant to enter the RCA.	wjg	ATB	psb
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	wjg	ATB	psb
	d. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no more than 30% of the items are duplicated on successive days.	wjg	ATB	psb
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	wjg	ATB	psb
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	wjg	ATB	psb
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	wjg	ATB	psb
	d. Check for duplication and overlap among exam sections.	wjg	ATB	psb
	e. Check the entire exam for balance of coverage.	wjg	ATB	psb
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	wjg	ATB	psb

	Printed Name / Signature	Date
a. Author	William J. Gross / William J. Gross	9/20/00
b. Facility Reviewer(*)	Andy T. Barbee / Andy T. Barbee	9/26/00
c. Chief Examiner	RICHARD S. BALDWIN / Richard S. Baldwin	12/04/00
d. NRC Supervisor	MIKE ERNSTES / Mike Ernstes	12/4/00

(*) Not applicable for NRC-developed examinations

Harris

ES-201 | Examination Security Agreement | Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of Dec 11, 2000 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 Dec 11, 2000. 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.	William Gross	Author		8/1/00		12/19/00	(1)
2.	Clarence P Matthews	acting for exam administrator		8/22/00		12/18/00	
3.	Andy T. Barbee	Supt - Operations Training		8/29/00		12/18/00	
4.	JAMES F. BRIGGS	SENIOR REACTOR OPERATOR		8/31/00		12/18/00	
5.	Terence T Toler	Training Instructor		9/4/00		12/18/00	
6.	Jerry L. Kneece	Reactor Operator		9-7-00		12-18-00	
7.	Sam Miller	Reactor Operator		9-27-00		01-04-01	
8.	SCOTT SCOTT	Reactor Operator		9-27-00		12-18-00	
9.	CORRY WARD	STA		10-3-00		1-4-00	
10.	Mike Weber	Project Manager		10-4-00		1-4-00	
11.	Michael J. Coffee	Control Room Supervisor		11-14-00		12/16/00	
12.	Wiley Killette	Training Instructor		11/27/00		12/18/00	
13.	Cathy Hobbs	Tech Aide - Trng		12-11-00		1-4-01	
14.	Larry Taylor	Training Instructor		12-12-00		12/18/00	
15.	Terry Hobbs	Manager - Operations		12-12-00		1/4/01	

NOTES: (1) per telecom

Harris

ES-201 Examination Security Agreement Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12/11/2000 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 12/11/00. 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.	Mark Palmer	MSO		12/12/00		01/04/01
2.	Ron L. Bright	Simulator Support		12/12/00		12/14/00
3.	Jeneca M. Midgette	Data Management Assistant		12/12/00		12/20/00
4.	D.D. McDade	Simulator Support		12/13/00		12/19/00
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

NOTES:

Facility: **HARRIS** Date of Examination: **DECEMBER 2000** Operating Test Number:

1. GENERAL CRITERIA	Initials a	Initials b	Initials 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).	WFS	ATB	MSD
b. There is no day-to-day repetition between this and other operating tests to be administered during this examination.	WFS	ATB	MSD
c. The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	WFS	ATB	MSD
d. Overlap with the written examination and between operating test categories is within acceptable limits.	WFS	ATB	MSD
e. It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	WFS	ATB	MSD
2. WALK-THROUGH (CATEGORY A & B) CRITERIA	---	---	---

a. Each JPM includes the following, as applicable:
- initial conditions
- initiating cues
- references and tools, including associated procedure
- 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
	WFS	ATB	MSD

b. The prescripted questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	N/A	N/A	N/A MSD
c. Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.	WFS	ATB	MSD
d. At least 20 percent of the JPMs on each test are new or significantly modified.	WFS	ATB	MSD
3. SIMULATOR (CATEGORY C) CRITERIA	---	---	---
a. The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	WFS	ATB	MSD

	Printed Name / Signature	Date
a. Author	William Gross / William Gross	10/16/00
b. Facility Reviewer(*)	Andy T. Barbee / Andy T. Barbee	10/25/00
c. NRC Chief Examiner (*)	RICHARD S. BALDWIN / Richard S. Baldwin	12/04/00
d. NRC Supervisor (*)	MICHAEL E. ERNITES / Michael E. Ernites	12/4/00

(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.

Facility: **HARRIS** Date of Exam: **DECEMBER 2000** Operating Test No.:

QUALITATIVE ATTRIBUTES	Initials a	Initials b	Initials 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.			
2. The scenarios consist mostly of related events.			
3. Each event description consists of • the point in the scenario when it is to be initiated • the malfunction(s) that are entered to initiate the event • the symptoms/cues that will be visible to the crew • the expected operator actions (by shift position) • the event termination point (if applicable)			
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.			
5. The events are valid with regard to physics and thermodynamics.			
6. Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
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.	NA	NA	NA
8. The simulator modeling is not altered.			
9. The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.			
10. Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.4 of ES-301.			
11. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			
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).			
13. The level of difficulty is appropriate to support licensing decisions for each crew position.			

TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)	Actual Attributes	---	---	---
1. Total malfunctions (5-8)	7 / 9 / 7	WJG	ATB	MD
2. Malfunctions after EOP entry (1-2)	2 / 3 / 2	WJG	ATB	MD
3. Abnormal events (2-4)	4 / 4 / 4	WJG	ATB	MD
4. Major transients (1-2)	1 / 2 / 2	WJG	ATB	MD
5. EOPs entered/requiring substantive actions (1-2)	2 / 1 / 2	WJG	ATB	MD
6. EOP contingencies requiring substantive actions (0-2)	1 / 1 / 2	WJG	ATB	MD
7. Critical tasks (2-3)	3 / 5 / 6	WJG	ATB	MD

A. William Gross / William Gross Author

B. Andy T. Barbee / Andy T. Barbee Facility Reviewer

C. RICHARD S. BALDWIN / Richard S. Baldwin NRC Lead Examiner

OPERATING TEST NO.: **SRO(U)-1**

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

Instructions:
(1) Enter the operating test number and Form ES-D-1event numbers for each evolution type.
(2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
(3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author: _____

Chief Examiner: _____

OPERATING TEST NO.: **SRO(U)-2**

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

Instructions:
(1) Enter the operating test number and Form ES-D-1event numbers for each evolution type.
(2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
(3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author: _____

Chief Examiner: _____

OPERATING TEST NO.: **SRO(U)-3**

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

Instructions:
(1) Enter the operating test number and Form ES-D-1event numbers for each evolution type.
(2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
(3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author: _____

Chief Examiner: _____

OPERATING TEST NO.: **SHNPP RO-1**

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

Instructions:
(1) Enter the operating test number and Form ES-D-1event numbers for each evolution type.
(2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
(3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author: _____

Chief Examiner: _____

OPERATING TEST NO.: **SHNPP RO-2**

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

Instructions:
(1) Enter the operating test number and Form ES-D-1event numbers for each evolution type.
(2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
(3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author: _____

Chief Examiner: _____

OPERATING TEST NO.: **SHNPP RO-3**

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

Instructions:
(1) Enter the operating test number and Form ES-D-1event numbers for each evolution type.
(2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
(3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author: _____

Chief Examiner: _____

OPERATING TEST NO.: **SHNPP**

Competencies	SRO-1	SRO-2	SRO-3	RO-1		RO-2		RO-3	
	SCEN.	SCEN.	SCEN.	SCENARIO		SCENARIO		SCENARIO	
	1 SRO	3 SRO	2 SRO	1 RO	2 BOP	1 BOP	3 RO	2 RO	3 BOP
Understand and Interpret Annunciators and Alarms	1-4-5-6-7-8-9	2-3-4-5-6	2-3-4-5-6-7-8	1-6-7	2-3-7-8	4-5-7-8-9	3-4-6	4-5-6-8	2-5-6
Diagnose Events and Conditions	1-4-5-6-7-8-9	2-3-4-5-6	2-3-4-5-6-7-8	1-6-7	2-3-7-8	4-5-7-8-9	3-4-6-7	4-5-6-8	2-5-6
Understand Plant and System Response	ALL	ALL	ALL	1-6-7	1-2-3-8	4-5-7-9	1-3-4-6	1-2-4-5-6-8	1-2-5-6
Comply With and Use Procedures (1)	ALL	ALL	ALL	1-3-6-7	1-2-3-7-8	2-3-4-5-7-8-9	1-3-4-6-7	1-2-4-5-6-8	1-2-5-6
Operate Control Boards (2)	NA	NA	NA	1-3-6-7	1-2-3-7-8	2-3-4-5-7-8-9	1-3-4-6-7	1-2-4-5-6-8	1-2-5-6
Communicate and Interact With the Crew	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
Demonstrate Supervisory Ability (3)	ALL	ALL	ALL						
Comply With and Use Tech. Specs. (3)	3-5	3-4	2-3						

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Author: Will Gross

Chief Examiner:

Facility: **HARRIS** Date of Exam: **11-DEC-00** Exam Level: **RO**

	Item Description	Initial a	Initial b*	Initial c#
1.	Questions and answers technically accurate and applicable to facility			
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401			
4.	Question duplication from the license screening/audit was controlled as indicated below (check the item that applies) and appears appropriate: ✓ the audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or __ the licensee certifies that there is no duplication; or __ the license exam was prepared by the NRC			
5.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right: Bank 47, Modified 38, New 15			
6.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right: Memory 45, C/A 55			
7.	References/handouts provided do not give away answers			
8.	Question content conforms with specific K/A statements in the previously approved examination outline; deviations are justified			
9.	Question psychometric quality and format meet ES, Appendix B, guidelines			
10.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet			

	Printed Name / Signature	Date
a. Author	William Gross / William Gross	10/24/00
b. Facility Reviewer(*)	Andy T. Barbee / Andy T. Barbee	10/26/00
c. NRC Chief Examiner(*)	RICHARD S. BALDWIN / Richard S. Baldwin	12/04/00
d. NRC Regional Supervisor(*)	MICHAEL E. ERNSTES / Michael E. Ernstes	12/5/0

Note: * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required.
See special instructions (Section E.2.c) for Items 1, 5, and 8.

Facility: **HARRIS** Date of Exam: **11-DEC-00** Exam Level: **SRO**

Item Description					Initial a	Initial b*	Initial c#
1.	Questions and answers technically accurate and applicable to facility				WJG	ATB	WJG
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available				WJG	ATB	WJG
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401				WJG	ATB	WJG
4.	Question duplication from the license screening/audit was controlled as indicated below (check the item that applies) and appears appropriate: ✓ the audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or __ the licensee certifies that there is no duplication; or __ the license exam was prepared by the NRC				WJG	ATB	WJG
5.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank: 45	Modified: 35	New: 20	WJG	ATB	WJG
6.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory: 40	C/A: 60		WJG	ATB	WJG
7.	References/handouts provided do not give away answers				WJG	ATB	WJG
8.	Question content conforms with specific K/A statements in the previously approved examination outline; deviations are justified				WJG	ATB	WJG
9.	Question psychometric quality and format meet ES, Appendix B, guidelines				WJG	ATB	WJG
10.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet				WJG	ATB	WJG

	Printed Name / Signature	Date
a. Author	William Gross / William Gross	10/24/00
b. Facility Reviewer(*)	Andy T. Barbee / Andy T. Barbee	10/26/00
c. NRC Chief Examiner(*)	RICHARD S. BALDWIN / Richard S. Baldwin	12/04/00
d. NRC Regional Supervisor(*)	MICHAEL E. ERNSTES / Michael E. Ernstes	12/5/00

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See special instructions (Section E.2.c) for Items 1, 5, and 8.

Shearon Harris Initial Examination 2000-301

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C1	M	2										S	Sig modified. Question appears to be ok. Agree with level of difficulty. Comment: Not sure why it is necessary to state the Shortest time. What is the significance of that? Agree, will remove the words. Ok as changed.
C2	M	3										E	Sig modified. Question appears to be ok. Can we make distractor "a" read a mode to make it like C? Will change the a to with the plant in mode 2. Ok as changed. Mike had a question if 'c' is a correct answer. Need to revisit that information. □ Changed distractor 'c' to avoid a potential problem. 12/1 change accepted Question is OK.
C3	M	2										S	Direct. Question appears to be ok. Is it fair to ask this question? Are the applicants required to know from memory the steps of the procedure? Discuss with licensee. Yes, the purpose of entry and exit they should know. Licensee wants to look at it again.□ 12/1 Licensee did determine that this is RO required knowledge.
C4	M	2-3										S	Direct. Question appears to be ok. Not sure that the word cannot needs to be bolded and capitalized. Reference provided does not identify what system is being described in the question. Apparently it is the monitor in the question. Done that way in the entire exam. Ok the way it is. No changes necessary.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward		
C5	M	3										E	Sig Modified. Question appears to be ok. Not sure that distractor "a" is that plausible. The breaker is described in the stem, I am not sure why anyone would pick that distractor. Is there any evidence that this could be selected? Will look to change 'a' and revisit.□ 12/1 Change is ok, question is fine as changed.
C6	A	3										S	Sig Modified. P&ID provided is essentially useless. Valve numbers could not be read. Question appears to be ok provided they do not receive a p&id. Will not get the p&id, no changes are necessary.
C7	A	3										S	Sig Modified. Question appears to be ok. In mode 5 are the charging pumps tagged out? The stem no longer refers to AOP-20 is there another procedure that would allow another answer to be correct? Do we need to put the requirements of AOP-20 in the stem? AOP-20 provided states the 150 gpm limit, this information is important. Licensee states that they should know they are in AOP-20. If you would go to AOP-16 and that kicks you out to AOP-20. OK as is no change necessary.
C8	M	2										S	Direct. Question appears to be ok. Do we need to put the procedure number and name in the stem of the question? This would link it to a procedure. The generator is being taken off line during a normal shutdown iaw GP-006. The first line "off the line" sounds strange. Would be better if it just said "off line." Will add GP-006, and remove the word the.
C9	A	3										S	Direct. Question appears to be ok. Need to underline <u>most significant action</u> in the stem to identify what we are asking. Will Bold and Caps this statement.
C10	A	3										S	**NEW**. Question appears to be ok.
C11	A	3										E	**NEW**. Need to add to the stem what ...the following actions in accordance with AOP-012. This will link it to that specific procedure. Not sure that distractor 'c' is a plausible distractor. When do you trip the turbine and verify the reactor has been tripped? Woof actions will be taken IAW .... Will change.. Will replace 'c' distractor.□ 12/1 change is fine question is ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C-12	A	3										S	Sig. Modified. Appears to be ok.

Instructions

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

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.

2. Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).

3. Check the appropriate box if a psychometric flaw is identified:
   - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
   - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
   - The answer choices are a collection of unrelated true/false statements.
   - More than one distractor is not credible.
   - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).

4. Check the appropriate box if a job content error is identified:
   - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
   - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
   - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
   - The question requires reverse logic or application compared to the job requirements.

5. Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?

6. For any "U" ratings, at a minimum, explain how the Appendix B psychometric attributes are not being met.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C13	K	3										S	**NEW**. NOT question, limited use. Appears to be ok.
C14	A	3	X									E	Sig. Modified. In stem of question last line of initial conditions does not have a period like rest of them. Justifications do not state why they are plausible because they are opposite of the answer. The wording of the stem seems strange. Can we say, WOOTF describes the INITIAL effect on RCS pressure for the following valve positions. Not sure that this question is significantly modified. Discuss with facility. Changed this question to a DIRECT. Agree it was not modified. Added the period. Change the stem to read, How is RCS pressure initially effected by the following valve failures? OK as changed.
C15	M	3										E	Direct. Why is distractor ""C" not plausible? I don't think that there is adequate information in the stem of the question. Will change the stem to remove the first alarm and put the VCT level at 19.5, the way it was originally. Ok as changed.
C21	A	3										S	Sig. Modified. Appears to be ok. Is this a question that the RO is expected to know? Yes it is RO knowledge. OK as is.
C22	K	2										E	Direct. Do not agree that distractor "c" is plausible. With no VCT make up it should be evident that there is no RCS leakage. Need a replacement for this distractor. Will add ALB-008 vice ALB-08 Will revisit it.□

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C23	K	3				X						E	Sig. Modified. The question is hard to read. It should say "WOOTF provide positive indications of fuel cladding failure." All distractors except the answer contain RCS boron decreasing. If the applicants know that fact then they can eliminate all distractors. Need to replace this with something else. Is there a misconception concerning this topic. Changed the distractors to remove the RCS Boron decreasing. Used reactor coolant filter high DP. Removed the word all also.
C24	A	3										S	Sig. Modified. Disagree with level of knowledge. In order to answer this question you either know or do not know the consequences of operating this switch at power. Nothing in the stem of the question or the distractors makes you analyze anything. This is a pure memory level question. Start Up should be hyphenated. Will change this to a knowledge level question. Will look up name of Start-up should be hyphenated.
C25	A	3										E	Sig. Modified. Agree Sig. Modified. Disagree with the level of knowledge. This is basically a direct look-up in the reference material provided. Do not agree with the plausibility of distractor 'b'. Explain why this would be considered plausible. AOP-037 does not have a ALB-23, why not? Change distractor 'b' to read, Diesel Generator System, level of knowledge is ok as analysis. ALB-23 is a back panel that is why it is not part of the mcb annunciators.
C26	K	3										E	Direct. In the conditions, add noun name for AOP-005. Last condition needs a period at end of sentence. Change the Stem to read easier. ALL FHB Operating Floor Supply Fans, XXXX, _____, FHB Normal Exhaust Isolation Dampers, XXXXX are _____. Have it a fill in the blank. Then the distractors can be a. Secured, Open b. Running, Open c. Secured, Shut d. Running, Shut This would make it easier to see and read. Since all the information appears to be the same for each distractor. Otherwise appears to be ok. Will add the AOP-005 noun name in the stem. Will put in a table format.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C27	A	3		X								U	Direct. I think that distractor "a" contains specific determiner. By stating that EPPs always have priority over FRPs you can effectively eliminate this as a possible answer. This distractor needs to be changed. Can it be written, Generally, FRPs take precedence over EPPs however, in this case the EPPs takes precedence over the FRP. Will this still be incorrect? Don't agree that distractor 'b' is plausible. Discuss with licensee. Is there a case where containment spray is NOT used when in recirculation mode? Distractor 'c', how would they know this? The distractor may be salvageable if you say something like it MAY be too low. Licensee agrees with 'a' having the specific determiner and needs to be changed. Distractor 'b' is valid. Will change distractor 'c' to add the MAY in the distractor as suggested. Changed 'a' to removed the always.
C28	A	3										S	Sig. Modified. Very low level analysis comprehension. Appears to be ok. I don't think anyone will get this wrong.
C29	A	3										S	**NEW**. Not sure how you can have as in distractor 'a' have no trains actuate to cause a reactor trip? Will change the stem, to remove resulting in a reactor trip. Ok as changed.
C30	A	4										S	**NEW**. Do not agree with level of difficulty. I believe it is more of a 3. Otherwise, appears to be ok. Need to recognize what happens? Licensee thinks this is a tough action.
C31	K	3	X									E	Direct. The initial conditions in the stem of the question do not provide what pumps are running. If you have a situation where the A MFWP is running only then there is no answer. I think we need to add some additional information in the stem. Based on the initial conditions, you have to have 2 MFPs running. They should know this. OK as is.
C32	A	3										S	Sig. Modified. Low level analysis. This is a plug and chug from the provided graph. Could have used a different temperature line. No change necessary.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C33	K	3	X									E	Direct. I was confused when I read this question. It appears to me that you are asking for a spurious actuation, no real signal is present. From the answer this is not true. Need to reword this to get this across. This is not the case. Need to change distractor a to make it look more like b. Manually actuate SI on "A" Train and continue in Path 1. OK as changed.
C34	A	3										S	Direct. Appears to be ok.
C35	A	3										S	**NEW**. Is it necessary to tell the applicants in the stem the instrument that fails. Is this too much to ask for them to just state that the instrument bus has lost power then determine the status of the AFW pump? OK as is. No change is necessary. This would be unreasonable to ask the applicant.
C41	A	3										S	Direct. Appears to be ok.
C42	A	3										S	**NEW**. Appears to be ok. Need to have the licensee explain. Diagram could not be read. OK as is. Explained ok.
C43	A	3										?	**NEW**. The information in AOP-024 provided did not give enough information concerning Instrument bus S1. The only information that talks to S1 is PIC 17 in line item 7. Additionally, there is another question that appears to ask the same information. Need to look at previous questions that deal with this topic. Why is it necessary to start the equipment if the other train works? Do we need to put in information about the other train? Yes, the information provided did provide the reason why. Other questions reviewed and did not interfere with this question. It is not necessary to put any further information in this question. Question is OK as is.
C44	K	3				X						S	Sig. Modified. Can not read the print provided by licensee. Not sure that distractor 'a' is plausible. Where are examples of only one MFW valve closing on an isolation signal.? Discuss with utility "A" distractor uses the AFW single SG isolation as compared to MFW which is all three. OK as is.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C45	K	2										S	Direct. The provided documentation have the same designation for the radiation monitor. It is two different ways in two different procedures. Why don't we add the Normal containment Supply in distractor A and then have a combination of two in b,c and d? RM the way it is written is ok. The Containment normal purge system is a combination of the supply and purge system. This is not a separate system as thought by the examiner. OK as is.
C46	K	3										S	Direct. Appears to be ok.
C47	A	3										S	Sig. Modified. Low level analysis. Appears to be ok.
C48	K	2										S	Direct. For distractor 'b', reverse the distractor place RCS pressure first and Pressurizer level second. That way it will look like the other distractors. Otherwise appears to be ok. Will change as requested. Ok as changed.
C49	A	3										E	Direct. This question is NOT an analysis/comprehension question. It is a simple memory level question. The question can stay as it, however, need to use a values that are not the actual setpoint. For example, distractor 'a' is at the SI setpoint, make that such that it is a value of 1832 psig. Distractor b is ok. Distractor c is on the setpoint. Make that more like 547 psig. And for distractor d make that a value of 125 psig/sec. Change 'a' to 1832, and 547 drops to and below. leave d as the same Will be ok the way it is changed.
C50	A	3										S	Sig. Modified. Was significantly modified. Low level application question. Not very challenging.
C51	A	3										S	Direct. Appears to be ok. Disagree with level of difficulty. Should be more of a 2. Also not sure that this is an analysis/comprehension question. More knowledge recall.
C52	K	3										S	Direct. Appears to be ok.
C53	A	4										S	**NEW**. Question appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C54	A	3										E	Direct. Appears to be ok. Would like to change distractor 'b'. Must be manually close, automatically closed, Auto open, automatically close. This will provide two manual and two auto open in the first column. Also change distractor c second column to be auto close. Agree to suggested change. Ok as changed.
C55	K	2										S	Direct. Appears to be ok.
C56	A	2										S	Direct. Low level analysis/comprehension. Appears to be ok.
C62	K	3										S	**NEW**. This looks to be a analysis/comp question and not a memory level question. Is this something that the plant expects the RO applicants to know?? Are they expected to know the foldout criteria? That's why it was considered a memory level question. Will change to analysis. Still a 3. Yes, an RO is expected to know this.
C63	A	3										S	Sig. Modified. Appears to be ok.
C64	A	3										S	Direct. Run this on the simulator to see if the power is just the same or it will be slightly lower. Otherwise appears to be ok. Will run on the simulator!!!□ Simulator run found that power would not be as expected. 12/1 Change is ok. Went to table format.
C65	K	2				X						S	Direct. Appears to be ok.
C66	A	3				X						E	Direct. Are the actions only listed in AOP-025? Do we need to state IAW AOP-025? This is not immediate operator actions, is it ok to ask? Not sure that distractor b is plausible. Why would we start RHR at 100% power? This does not make sense for this plant condition. Agree RHR load block 9 is not a good distractor. Another distractor could be to Trip the reactor and follow EOP Path-1. Change ok. Ok as changed.
C67	A	3										S	Direct. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C68	K	2										S	Direct. Appears to be ok.
C69	A	3										?	Sig. Modified. Do not agree with level of difficulty. Maybe more like a 2. Do not agree with being significantly modified. The initial question distractors are harder. Can we change this question to ask it in reverse. Start in the lower ambient temperature and go hotter. Level of difficulty 2. Agree with making it a 2 Will change the order of the temperatures.
C70	A	3										S	Sig. Modified. Original question not provided to check degree of modification. Appears to be ok. Will provide the original question.□
C71	A	3										S	**NEW.** Appears to be ok. Does it matter that the stem is in past tense and the distractors are present? Change stem to should automatically occur. Change is ok
C72	K	3										S	Sig. Modified. The reference material provided does not provide information concerning the non-essential header. Appears to be ok. Significantly modified after the reviews. Totally rewrote the distractors. Reference is not necessary for review. 12/1 an instructor raised a point that could cause a problem with the question. Changed the distractor and the stem. Question is ok as changed.
C73	K	3										S	Sig. Modified. Appears to be ok.
C74	A	3										S	**NEW.** Appears to be ok.
C75	K	3				X						E	Sig. Modified. Distractor d does not make sense to me. Can this be changed? This does not need to be changed. This is a common misunderstanding. OK as is.
C81	A	3										S	Direct. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward		
C82	K	3				X						E	Direct. Why was 12 feet selected what is the justification? Could use a number like 21 to be confused with TS. Agree will change the distractor from 12 to 21. 12 was the length of the fuel assembly. 12/1 ok as changed.
C83	A	3	X									E	Direct. Not sure that the stem will illicit the correct answer. These are all actions from the procedure. Do we need to have an indication of Reactor Pressure? The stem could be reworded to, If ..... the next operator action should be....Otherwise it appears to be ok. Change distractor c to read maintain letdown flow vice control. OK as changed.
C84	A	3										S	Direct. Appears to be ok.
C85	K	2										S	Sig. Modified. Appears to be ok. Low level knowledge.
C86	K	3										S	Direct. Appears to be ok.
C87	A	3										S	Direct. Appears to be ok
C88	A	4										S	Direct. Appears to be ok. However, can not determine from the reference material the correct values to use when doing a manual calculation. Have licensee explain where these came from. Do not agree with level of difficulty. Should be closer to a 3. OK as is. No change is necessary.
C89	A	4										S	Sig. Modified. Appears to be ok.
C90	K	3										S	Direct. Appears to be ok. Can not determine the valves from the print. Need licensee to explain. OK as is, no change necessary.
C91	K	3										S	Direct. Appears to be ok. Disagree with level of difficulty. Should be more like a 2. But is ok.
C92	K	3										S	Direct. Appears to be ok.
C93	K	2										S	Direct. Why is it necessary to state in the stem the 65% level. Teaching the low level alarm setpoint? Recommend removing this value. It is not relevant to the question. Wanted to have the applicants answer the question based on the 65% alarm and not to the 10% ALARM. OK as is, the value can stay in.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
C94	A	2										S	**NEW**. Appears to be ok.
C95	A	3										S	Sig. Modified. Appears to be ok.
RO Examination Only													
R16	K	3										S	Sig. Modified. Appears to be ok.
R17	K	3										S	Direct. Level of difficulty more like a 2. Appears to be ok.
R18	K	3										S	Sig. Modified. Appears to be ok.
R19	K	2										S	Direct. The justification sheet states this is a direct question but there is a question attached. May have been a Sig. Modified. ?Appears to be ok.
R20	K	2										S	Sig. Modified. Appears to be ok.
R36	A	3										S	Direct. Disagree with analysis designation. What information do you analyze to get this answer? If you put in there that the power supply to the miniflow valves failed and did not state that these valve could not be opened then it would be an analysis. This is more memory level. Low level analysis. Ok as is. There is some requirement of analyzing.
R37	A	3										S	Sig. Modified. Appears to be ok.
R38	A	3										S	Sig. Modified. Appears to be ok.
R39	A	3										S	**NEW**. Appears to be ok.
R40	K	2										S	Sig. Modified. Appears to be ok. Simple
R56	K	3										S	Direct. Appears to be ok.
R57	K	3				X						E	Sig. Modified. Distractor 'a' does not make sense to me. It would not be a plausible distractor if we are doing an rapid shutdown. Need another distractor. What is GP-006? We need to add the noun name for the procedure. Will add the noun name for GP-006. Will change the stem to add SCO directs to perform a rapid addition of boric acid in accordance with OP-107. Noun name. Also add a power level of 100%. Distractor A would be reducing reactor power less than 50% reactor power. □□ 12/1 Changed as is requested. Power level in the stem is not necessary. Ok as it is now.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5.	6.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	U/E/S	Explanation
R58	K	2										S	Direct. Appears to be ok.
R59	K	3				X						U?	Direct. Not sure that distractors 'c' and 'd' are credible. Is there a low flow trip of the MFP? Distractor 'd' does not make sense to me, is there any other system that you have that has this feature? Discuss with licensee. There is a low flow stop of the MFP, it just does not start the other MFP. When you place the MFP in stop this allows the AFW autostart feature to be blocked. OK as is.
R60	A	3										S	Direct. Explain, Otherwise, appears to be ok. You have an SI which will isolate the normal fans. Leaving only the airborne radioactivity removal fans running.
R76	K	3										S?	Direct. Appears to be ok. Do not agree with level of knowledge, appears to be more of an analysis level. What do you have to do to analyze this? Explain OK as is.
R77	A	3										S	**NEW.** Add GP-007 noun name. Appears to be ok. Will add the noun name to this question.
R78	A	3										S	Sig. Modified. Appears to be ok.
R79	A	3										?	Sig. Modified. Is it necessary to point that PI-403 has failed low. Could we use a very low number? Discuss with licensee. Otherwise appears to be ok. Do not need to have it failed low. Licensee recommended to change from failed low to 980. That is acceptable. OK as changed.
R80	K	3										S	Sig. Modified. I don't like the use of the setpoint in the distractors. Would like to see some other number. This keys the applicants to the answer. Can we use a different number in a and b? Otherwise appears to be ok. Last bullet needs to be changed to CST is dropping rapidly due to a tank rupture. Otherwise OK.
R96	A	3										S	Sig. Modified. Appears to be ok.
R97	K	2										S	Direct. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward		
R98	K	3										S	Direct. Appears to be ok.
R99	K	3										S	Sig. Modified. Appears to be ok.
R100	A	3										S?	Sig. Modified. Stem teaches that N-35 is undercompensated. This is not necessary to state this information. Otherwise appears to be ok. WOOTF describes the effect on the SR Nuclear Instrumentation system. 12/1 spot check ok.
SRO Examination Only													
S16	A	3										?	Direct. Why is this SRO knowledge only?? OK as is. This question is looking at the GP and knowing what you have to do. No changes are necessary.
S17	K	3										S	Direct. Why is it necessary to state Foldout page is applicable? Is it necessary? Not sure that it is. Otherwise ok. OK as is.
S18	A	3										S	**NEW**. Appears to be ok.
S19	K	3										S	Direct. Appears to be ok.
S20	K	3										S	Direct. Disagree with level of difficulty. May be a 2. Otherwise appears to be ok.
S36	K	3										S	**NEW**. Appears to be ok.
S37	A	3										S	Sig. Modified. Appears to be ok.
S38	A	3										S	**NEW**. Appears to be ok.
S39	A	3										S	Sig. Modified. Appears to be ok.
S40	K	3										S	Direct. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward		
S56	A	3				X						E	Sig. Modified. Not sure this is an analysis question. It becomes a math problem. Why would anyone decide to use the 1600 line in stead of the 600 psig line. Maybe the 800 line would be a better choice. Will change this to use the 800 lb line. Will revisit this.□ 12/1 changed as requested. Question is ok as is.
S57	K	3										S	Sig. Modified. Appears to be ok.
S58	K	3										S?	**NEW**. Appears to be ok. SRO only? OK as is. It is SRO only
S59	K	2										S?	Sig. Modified. Appears to be ok. Why SRO only? This is on the SSO turnover sheet. OK as is.
S60	A	3										S	Direct. Not sure this is analysis. More like memory/knowledge level. Otherwise appears to be ok. Need to look at the overall number of knowledge level. OK as is. Low level analysis. OK as it is described.
S76	A	3				X						S	**NEW** The answer seems to jump out. Appears to be ok.
S77	K	2										S	Sig. Modified. Appears to be ok.
S78	A	3										S	Sig. Modified. Add noun name to GP-004, Not hard, Appears to be ok. GP-006 and AOP-2 Will add the noun names.
S79	K	3										S	Sig. Modified. Appears to be ok.
S80	A	2										S	**NEW**. Appears to be ok. SRO only? Ok as SRO only.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward		
S96	A	3										S	Direct. Minimal analysis, Appears to be ok. SRO only? Need to add the Surveillance names? Do not need the noun names. It is directed by the procedure, ROs are only required to know entry and 1 hour LCOs. Ok as SRO only.
S97	A	3										S	Sig. Modified. Appears to be ok. SRO only? Not sure if this only an SRO question. Need to look and see if this is JUST SRO only. Revisit this one.□ 12/1 Yes, it is SRO only. Facility states it is an SRO only knowledge. Ok as is. No change necessary.
S98	A	3										S	Direct. Appears to be ok.
S99	A	3										S	**NEW**. Appears to be ok.
S100	A	3										S	Sig Modified. Appears to be ok. The initial question and the final question both have the same answer. Meaning that the answer is 'd', is it possible to change the answers to get an answer other than 'd'. Have a misconception that goes beyond the correct answer. Will revise to have C as the answer, and add another distractor to d to make an incorrect answer. 12/1, Changed as requested. OK as is.

Facility: Harris	Date of Exam: 12/15/00	Exam Level: **RO/SRO**		
	Item Description	Initials a	b	c
1.	Answer key changes and question deletions justified and documented	RSB		BNH
2.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	RSB		BNH
3.	Grading for all borderline cases (80% +/- 2%) reviewed in detail	NA RSB		N/A BNH
4.	All other failing examinations checked to ensure that grades are justified	NA RSB		N/A BNH
5.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	RSB		BNH

	Printed Name / Signature	Date
a. Grader	_Richard S. Baldwin/Richard S. Baldwin	12/21/00
b. Facility Reviewer(*)	_N/A_	N/A
c. NRC Chief Examiner (*)	_Bobby L. Holbrook/Bobby L. Holbrook	12/21/00
d. NRC Supervisor (*)	Michael E. Ernstes/Michael E. Ernstes	1/3/01

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

Facility: Harris Nuclear Plant		Date of Examination: December 11-15, 2000
	Task Description	Date Complete
1.	Facility written exam comments or graded exams received and verified complete	12/21/00
2.	Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	NA
3.	Operating tests graded by NRC examiners	12/21/00
4.	NRC Chief examiner review of written exam and operating test grading completed	01/03/01
5.	Responsible supervisor review completed	01/04/01
6.	Management (licensing official) review completed	01/04/01
7.	License and denial letters mailed	01/05/01
8.	Facility notified of results	01/05/01
9.	Examination report issued (refer to NRC MC 0610)	01/08/01
10.	Reference material returned after final resolution of any appeals	N/A

LICENSEE POST-EXAM COMMENTS

HARRIS EXAM 2000-301

DECEMBER 11 - 15, 2000

LICENSEE POST-EXAM COMMENTS

None

CP&L
A Progress Energy Company

James Scarola
Vice President
Harris Nuclear Plant

SERIAL: HNP-00-185

Mr. Michael E. Ernstes, Region II
United States Nuclear Regulatory Commission
Sam Nunn Atlanta Federal Center, 23 T 85
61 Forsyth Street, S. W.
Atlanta, GA 30303-3415

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REACTOR OPERATOR AND SENIOR REACTOR OPERATOR
WRITTEN EXAMINATION COMMENTS

Dear Mr. Ernstes:

Carolina Power & Light Company's Harris Nuclear Plant does not have concerns regarding questions included in the Reactor Operator or Senior Reactor Operator written license examinations administered on December 15, 2000 and therefore, no comments are being submitted. There were no changes made to the exam during its administration; therefore, no annotated copies are being sent with the Post-examination package.

Questions regarding this matter may be referred to Mr. Andy Barbee at (919) 362-3313 or Mr. Terry Toler at (919) 362-3493.

Sincerely,

Christopher L. Burton for Jim Scarola

RTG

DEC 21 2000

cc: Mr. J. B. Brady, NRC Sr. Resident Inspector
Mr. Rich Laufer, NRC Project Manager
NRC Document Control Desk
Mr. L. A. Reyes, NRC Regional Administrator

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