

ADMINISTRATIVE DOCUMENTS

(Yellow Paper)

1. Exam Preparation Checklist ES-201-1 ✓
2. Exam Outline Quality Checklist ES-201-2 ✓
3. Exam Security Agreement(s) ES-201-3 ✓
4. Administrative Topics Outline (Final) ES-301-1 ✓
5. Control Room Systems & 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. Facility Submittal Letter DTD 1-4-2006 [✓]

HARRIS JAN/FEB 2006 EXAM

05000400/2006301

**JANUARY 23 - FEBRUARY 2, 2006
FEBRUARY 6, 2006 (WRITTEN)**

Facility: Harris Date of Examination: 1/ 23 - 2/ 6 /2006
 Examination Prepared By (Circle): Facility NRC
 Written / Operating Test N/A

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	62
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	62
-120	3. Facility contact briefed on security and other requirements (C.2.c)	62
-120	4. Corporate notification letter sent (C.2.d)	62
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	62
{-75}	6. Integrated examination outline(s) due, including Forms ES-201-2, ES-201-3, ES-301-1, ES-301-2, ES-301-5, ES-D-1's, ES-401-1/2, ES-401-3, and ES-401-4, as applicable (C.1.e and f; C.3.d)	62
{-70}	[7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)]	62
{-45}	8. Proposed examinations (including written, walk-through JPMs, and scenarios, as applicable), supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, and ES-401-6), and reference materials due (C.1.e, f, g and h; C.3.d)	62
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	62
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	62
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	62
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	62
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	62
-7	14. Final applications reviewed; 1 or 2 (if >10) applications audited to confirm qualifications / eligibility; and examination approval and waiver letters sent (C.2.i; Attachment 4; ES-202, C.2.e; ES-204)	62
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	62
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	62

* Target dates are generally based on facility-prepared examinations and 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] {Does not apply} to examinations prepared by the NRC.

Facility:	Shearon Harris		Date of Examination:	1/23/2006		
Item	Task Description	Initials				
		a	b*	c#		
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	AS	bu	62		
	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.	AS	bu	62		
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	AS	bu	62		
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	AS	bu	62		
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	AS	bu	62		
	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; and ensure that 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 on subsequent days.	AS	bu	62		
	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.	AS	bu	62		
3. W / T	a. Verify that systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks, distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form, (3)* no tasks are duplicated from the applicants' audit test(s) (4) the number of alternate path, low-power, emergency and RCA tasks meet the criteria on the form.	AS	bu	62		
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form (2) at least one task is new or significantly modified (3) no more than one task is repeated from the last two NRC licensing examinations	AS	bu	62		
	c. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	AS	bu	62		
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.	AS	bu	62		
	b. Assess whether the 10CFR 55.41/43 and 55.45 sampling is appropriate.	AS	bu	62		
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	AS	bu	62		
	d. Check for duplication and overlap among exam sections.	AS	bu	62		
	e. Check the entire exam for balance of coverage.	AS	bu	62		
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	AS	bu	62		
a. Author		Artie Sylvester /		Date		
b. Facility Reviewer (*)		Doug Schroeder /		1/15/2006		
c. NRC Chief Examiner (#)		Edwin Lee, Jr. / Edwin Lee, Jr.		1/19/2006		
d. NRC Supervisor		James H. Moorhead / James H. Moorhead		1/19/06		
NOTE: # 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 1/23/06 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 (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). 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 1-25/2-6-06. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. <u>James H. Lloyd</u>	<u>Exam Development</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>*1</u>
2. <u>James H. Lloyd</u>	<u>Exam Development</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>*1</u>
3. <u>Regulatory Security Admin</u>	<u>Regulatory Security Admin</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>*1</u>
4. <u>Robert Smith</u>	<u>Facility Support</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>2</u>
5. <u>John Weiner</u>	<u>Facility Support</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>[Signature]</u>	<u>2/8/06</u>	<u>2</u>
6. <u>WASIVS-100</u>	<u>Sec. Instr. Facility Rep</u>	<u>[Signature]</u>	<u>2-6-06</u>	<u>[Signature]</u>	<u>2-6-06</u>	<u>2</u>
7. <u>Ken Bland</u>	<u>Simulation Support</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>2</u>
8. <u>D.R. McNamee</u>	<u>Sim Support</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>2</u>
9. <u>Keith Butler</u>	<u>SEC/STA - Simulator Support</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>2</u>
10. <u>Jeffrey Hayes</u>	<u>Security</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>2</u>
11. <u>Robert Smith</u>	<u>SEC/OPS</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>*1</u>
12. <u>Jeffrey Hayes</u>	<u>SEC/OPS</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>*1</u>
13. <u>Robert Smith</u>	<u>SEC/OPS</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>*1</u>
14. <u>Robert Smith</u>	<u>SEC/OPS</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>*1</u>
15. <u>Robert Smith</u>	<u>SEC/OPS</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>[Signature]</u>	<u>2/10/06</u>	<u>*1</u>

NOTES:

WHEELS PLANT

- *1 Per telecom w/ Archie Lucky (out of area)
- 2 No longer Progress Energy employee

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 1/23/06 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 (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). 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 1/23/2-6-06. 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. Teresa Midgeette	Docu Mgmt Asst I	Teresa Midgeette	10/17/05	Jesse Midgeette	3/7/06	
2. Lowell Harkness	Control Operator	Lowell Harkness	10/21/05	Lowell Harkness	2/7/06	
3. Robert Stephens	Control Operator	Robert Stephens	10/21/05	Robert Stephens	2/7/06	
4. Robert Stephens	Control Operator	Robert Stephens	10/31/05	Robert Stephens	2/7/06	
5. William D. Ginter	Control Room Supv	William D. Ginter	10/31/05	William D. Ginter	2/7/06	
6. Tim Englund	SRO	Tim Englund	10/31/05	Tim Englund	2/7/06	
7. Chris Allen	NIT	Chris Allen	10/31/05	Chris Allen	2/7/06	
8. Anna Marie Terk	NIT	Anna Marie Terk	10/31/05	Anna Marie Terk	2/7/06	
9. Archie Lucky	Sr. Instr/Facility Dep	Archie Lucky	1/4/06	Archie Lucky	2/7/06	
10. Ken Olive	Sr. Instructor	Ken Olive	1/4/06	Ken Olive	2/7/06	
11. Tom Craig	Sr. Instructor	Tom Craig	1/4/06	Tom Craig	2/7/06	
12. W. Scott Saunders	Control Room Supv.	W. Scott Saunders	1/20/06	W. Scott Saunders	2-7-06	
13. John C. Warner	Mgt-SH-TH OPS	John C. Warner	1/24/06	John C. Warner	2-1-06	
14. Greg Kilpatrick	Supt-QPS T/A	Greg Kilpatrick	2/7/06	Greg Kilpatrick	2/7/06	
15. Greg Kilpatrick	Supt-QPS T/A	Greg Kilpatrick	2/7/06	Greg Kilpatrick	2/7/06	

NOTES:

HARRIS PLANT

*1 Per telecom w/ Archie Lucky

Facility: Shearon Harris		Date of Examination: 1/23/2006
Examination Level (circle one): RO / SRO		Operating Test Number: NRC
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M,R	Given a set of conditions, determine RCS sub-cooling with the monitor inoperable. (Bank CR-124) 2.1.25 Ability to obtain and interpret station reference material such as graphs, nomographs, and tables which contain performance data (2.8)
Conduct of Operations	P,R or S	Evaluate rod alignment using in-core thermocouples. (2002 NRC Exam – RO A1-1) 2.1.19 Ability to use plant computer to obtain and evaluate parametric information on system or component status (3.0)
Equipment Control	M,R	Perform the RCS Water Inventory Balance surveillance procedure. (Bank CR-014) 2.2.12 Knowledge of surveillance procedures (3.0)
Radiation Control	N,R	Given a specific work situation, determine maximum stay time and review the Radiation Work Permit. 2.3.1 Knowledge of 10CFR20 and related facility radiation control requirements (2.6)
Emergency Plan		NOT SELECTED
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.		
*Type Codes & Criteria: (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (> 1) (P)revious 2 exams (≤ 1; randomly selected)		

Shearon Harris 2006 NRC RO EXAMINATION**CONDUCT OF OPERATIONS (A1)**

Provided with a set of conditions, the candidate will calculate subcooling margin in accordance with the EOP USERS GUIDE. Modify Bank JPM CR-124 to change the calculated subcooling margin and allow completion in a classroom setting.

CONDUCT OF OPERATIONS (A2)

Randomly selected repeat from the 2002 NRC Examination (RO A1-1). The candidate will use AOP-001, Attachment 1, Indications of Misaligned Rod, and Attachment 2, Adjacent and Symmetric Thermocouple Locations, to evaluate a suspected control rod misalignment.

EQUIPMENT CONTROL (A3)

Given a set of conditions, the candidate will complete surveillance procedure OST-1026, REACTOR COOLANT SYSTEM LEAKAGE EVALUATION. Modify Bank JPM CR-014 to change the calculated RCS leak rate.

RADIATION CONTROL (A4)

The candidate will be presented with a situation requiring calculation of TEDE dose for performing a specific job and then will review an incorrectly prepared RWP related to performing that task. This is a new JPM.

Facility: Shearon Harris		Date of Examination: 1/23/2006
Examination Level (circle one): RO / SRO		Operating Test Number: NRC
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M,R	Given a set of conditions, determine RCS sub-cooling with the monitor inoperable. (Bank CR-124) 2.1.25 Ability to obtain and interpret station reference material such as graphs, nomographs, and tables which contain performance data (3.1)
Conduct of Operations	P,R or S	Review and approve the daily surveillance requirements log. (2002 NRC SRO A1-1) 2.1.18 Ability to make accurate, clear, and concise logs, records, status boards, and reports (3.0)
Equipment Control	M,R	Given a set of conditions, perform the RCS Water Inventory Balance surveillance procedure and evaluate compliance with technical specifications. (Bank CR-014) 2.2.12 Knowledge of surveillance procedures (3.4)
Radiation Control	N,R	Given a specific work situation, determine maximum stay time and review the Radiation Work Permit. 2.3.1 Knowledge of 10CFR20 and related facility radiation control requirements (3.0)
Emergency Plan	M,R	Given a set of conditions, determine the Emergency Action Level (EAL). 2.4.41 Knowledge of the emergency action level thresholds and classifications (4.1)
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.		
*Type Codes & Criteria: (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (> 1) (P)revious 2 exams (≤ 1; randomly selected)		

Facility:	Shearon Harris	Date of Examination:	1/23/2006
Exam Level (circle one):	RO / SRO(I) / SRO (U)	Operating Test No.:	NRC
Control Room Systems® (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U, including 1 ESF)			
System / JPM Title		Type Code*	Safety Function
a.	Perform OST-1005, CONTROL ROD AND ROD POSITION INDICATOR EXERCISE.	P,A,L,S	1
b.	Take corrective action for failure of CSIP mini-flow valve(s) to re-position on demand in accordance with PATH-1.	N,A,E,S	2
c.	Perform OST-1805, PZR PORV OPERABILITY.	D,L,S	3
d.	Take an operating RHR loop out of service in accordance with OP-111, RESIDUAL HEAT REMOVAL SYSTEM, Section 7.1.	N,L,S	4P
e.	Take corrective action for failure of the main turbine to trip in accordance with PATH-1.	D,A,E,S	4S
f.	Take corrective action for improper Containment Spray alignment in accordance with PATH-1.	P,A,E,S	5
g.	Remove a PRNIS Channel from service in accordance with OWP-RP, REACTOR PROTECTION.	D,S	7
h.	Take corrective action for loss of vital instrument bus SIII in accordance with AOP-024, LOSS OF UNINTERRUPTIBLE POWER SUPPLY. (Performed by RO applicants only)	N,A,E,S	6
In-Plant Systems® (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i.	Manually control charging flow in accordance with AOP-017, LOSS OF INSTRUMENT AIR.	P,R,E	2
j.	Inhibit both trains of SSPS in accordance with AOP-036, SAFE SHUTDOWN FOLLOWING A FIRE.	D,E	7
k.	Reset the TDAFW Pump mechanical overspeed trip in accordance with OP-137, AUXILIARY FEEDWATER SYSTEM.	D,R	4S

@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.	
* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)
(R)CA	$\geq 1 / \geq 1 / \geq 1$
(S)imulator	

Shearon Harris 2006 NRC EXAMINATION JPM SUMMARY DESCRIPTIONS

- a. Perform OST-1005, CONTROL ROD AND ROD POSITION INDICATOR EXERCISE. While the testing is in progress two control rods will drop, requiring the candidate to initiate a reactor trip. Randomly selected repeat from the 2004 NRC Examination: 301-2, Item f.
- b. Take corrective action for failure of CSIP mini-flow valve(s) to re-position on demand in accordance with PATH-1. While reducing ECCS flow, the common mini-flow valve will fail to open requiring the candidate to take alternative action to ensure adequate pump flow. New JPM. ***SRO upgrade applicants will also perform this task.***
- c. Perform OST-1805, PZR PORV OPERABILITY. The candidate will perform the surveillance on one PORV with the unit in Mode 5. Facility Bank JPM CR-087.
- d. Take an operating RHR loop in out of service in accordance with OP-111, RESIDUAL HEAT REMOVAL SYSTEM, Section 7.1. The candidate will shift from two RHR Loops in service to one RHR Loop in service while RCS cooling is in progress. New JPM. ***SRO upgrade applicants will also perform this task.***
- e. Take corrective action for failure of the main turbine to trip in accordance with PATH-1. The candidate will verify a reactor trip and take alternative actions to isolate the main turbine from the steam supply. Facility Bank JPM CR-103.
- f. Take corrective action for improper Containment Spray (CS) alignment in accordance with PATH-1. The candidate will evaluate containment pressure, manually start and align the CS Pumps, and stop the Reactor Coolant Pumps. Randomly selected repeat from the 2002 NRC Examination: 301-2, Item d. ***SRO upgrade applicants will also perform this task.***
- g. Remove a PRNIS Channel from service in accordance with OWP-RP, REACTOR PROTECTION. The candidate will perform the switch manipulations to remove a failed PRNIS channel from service. Facility Bank JPM CR-019.
- h. Take corrective action for loss of vital instrument bus SIII in accordance with AOP-024, LOSS OF UNINTERRUPTIBLE POWER SUPPLY. The candidate will be required to recognize failure of Instrument Bus SIII and to perform the associated immediate actions. New JPM. This task will only be performed by RO applicants.
- i. Manually control charging flow in accordance with AOP-017, LOSS OF INSTRUMENT AIR. The candidate will simulate local control of charging flow. Randomly selected repeat from the 2002 NRC Examination: 301-2, Item i.
- j. Inhibit both trains of SSPS in accordance with AOP-036, SAFE SHUTDOWN FOLLOWING A FIRE. The candidate will locate the cabinets and simulate removal of the fuses for inhibiting SSPS. Facility Bank JPM IP-141. ***SRO upgrade applicants will also perform this task.***
- k. Reset the TDAFW Pump mechanical overspeed trip in accordance with OP-137, AUXILIARY FEEDWATER SYSTEM. The candidate will simulate the actions for resetting the TDAFW Pump overspeed trip. Facility Bank JPM IP-001. ***SRO upgrade applicants will also perform this task.***

Facility: Harris		Date of Examination: 1/23/2006	Operating Test Number: NRC	
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).	JKL	bm	td
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JKL	bm	td
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	JKL	bm	td
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	JKL	bm	td
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JKL	bm	td
2. WALK-THROUGH CRITERIA		-	-	-
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 * operationally important 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	JKL	bm	td
b.	Ensure that any changes from the previously approved systems and administrative walk-through outlines (Forms ES-301-1 and 2) have not caused the test to deviate from any of the acceptance criteria (e.g., item distribution, bank use, repetition from the last 2 NRC examinations) specified on those forms and Form ES-201-2.	JKL	bm	td
3. SIMULATOR CRITERIA		-	-	-
The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.		JKL	bm	td
Printed Name / Signature		Date		
a.	Author <u>James K. Lloyd / see attached fax</u>	1/15/06		
b.	Facility Reviewer (*) <u>D. Schroeder / Doug Schroeder</u>	1-17-06		
c.	NRC Chief Examiner (#) <u>Edwin Lee, Jr. / Edwin Lee, Jr.</u>	1-19-06		
d.	NRC Supervisor <u>James H. Moorman, Jr. / J. H. Moorman</u>	1-19-06		
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.				

ES-301

Operating Test Quality Checklist

Form ES-301-3

Facility: Harris		Date of Examination: 1/23/2006		Operating Test Number: NRC	
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).		JKL		
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.		JKL		
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).		JKL		
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.		JKL		
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.		JKL		
2. WALK-THROUGH CRITERIA			-	-	-
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 * operationally important 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		JKL		
b.	Ensure that any changes from the previously approved systems and administrative walk-through outlines (Forms ES-301-1 and 2) have not caused the test to deviate from any of the acceptance criteria (e.g., item distribution, bank use, repetition from the last 2 NRC examinations) specified on those forms and Form ES-201-2.		JKL		
3. SIMULATOR CRITERIA			-	-	-
The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.			JKL		
		Printed Name / Signature	Date		
a.	Author	James K. Lloyd <i>James K. Lloyd</i>	1/15/06		
b.	Facility Reviewer (*)				
c.	NRC Chief Examiner (#)				
d.	NRC Supervisor				
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

Facility: Shearon Harris Date of Exam: 1/23/2006 Scenario Numbers: 1/2/3/4 Operating Test No.: NRC

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.				JKL	ben	ed				
2.	The scenarios consist mostly of related events.				JKL	ben	ed				
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)				JKL	ben	ed				
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.				JKL	ben	ed				
5.	The events are valid with regard to physics and thermodynamics.				JKL	ben	ed				
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.				JKL	ben	ed				
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.				N/A	ben					
8.	The simulator modeling is not altered.				JKL	ben	ed				
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.				JKL	ben	ed				
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. (NO bank scenarios utilized)				JKL	ben	ed				
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).				JKL	ben	ed				
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).				JKL	ben	ed				
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.				JKL	ben	ed				
Target Quantitative Attributes (Per Scenario; See Section D.5.d)					Actual Attributes				-	-	-
					1	2	3	4			
1.	Total malfunctions (5-8)				8	8	8	7	JKL	ben	ed
2.	Malfunctions after EOP entry (1-2)				2	3	3	2	JKL	ben	ed
3.	Abnormal events (2-4)				3	2	2	2	JKL	ben	ed
4.	Major transients (1-2)				2	2	1	2	JKL	ben	ed
5.	EOPs entered/requiring substantive actions (1-2)				2	2	1	2	JKL	ben	ed
6.	EOP contingencies requiring substantive actions (0-2)				1	0	1	1	JKL	ben	ed
7.	Critical tasks (2-3)				3	2	2	3	JKL	ben	ed

① Scenario #2 not selected by NRC Lead Examiner and thus not resubmitted.

N/A ben
① 1/17/06

Facility: Shearon Harris		Date of Exam: 1/23/2006		Operating Test No.: NRC													
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		Scenario #1			Scenario #4			N/A			N/A						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P		R	I	U
SROU-1	RX													0	1	1	0
	NOR	1			1									2	1	1	1
	I/C	23 45 79			34 56 8									11	4	4	2
	MAJ	68			79									4	2	2	1
	TS	34			23									4	0	2	2
SROU-2	RX													0	1	1	0
	NOR	1			1									2	1	1	1
	I/C	23 45 79			34 56 8									11	4	4	2
	MAJ	68			79									4	2	2	1
	TS	34			23									4	0	2	2
SROU-3	RX													0	1	1	0
	NOR	1												1	1	1	1
	I/C	23 45 79												6	4	4	2
	MAJ	68												2	2	2	1
	TS	34												2	0	2	2
SROU-4	RX													0	1	1	0
	NOR	1												1	1	1	1
	I/C	23 45 79												6	4	4	2
	MAJ	68												2	2	2	1
	TS	34												2	0	2	2
SROI-1	RX		1											1	1	1	0
	NOR				1									1	1	1	1
	I/C		25 79		34 56 8									9	4	4	2
	MAJ		68		79									4	2	2	1
	TS				23									2	0	2	2

Facility: Shearon Harris		Date of Exam: 1/23/2006		Operating Test No.: NRC													
A P P L I C A N T	E V E N T T Y P E	Scenarios															
		Scenario #1			Scenario #4			N/A			N/A			T O T A L	M I N I M U M(*)		
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P		R	I	U
RO-1	RX		1											1	1	1	0
	NOR						1							1	1	1	1
	I/C		25 79				46 8							7	4	4	2
	MAJ		68				79							4	2	2	1
	TS													0	0	2	2
RO-2	RX					1								1	1	1	0
	NOR			1										1	1	1	1
	I/C			34 9		35								5	4	4	2
	MAJ			68		79								4	2	2	1
	TS													0	0	2	2
RO-3	RX		1											1	1	1	0
	NOR						1							1	1	1	1
	I/C		25 79				46 8							7	4	4	2
	MAJ		68				79							4	2	2	1
	TS													0	0	2	2
RO-4	RX					1								1	1	1	0
	NOR			1										1	1	1	1
	I/C			34 9		35								5	4	4	2
	MAJ			68		79								4	2	2	1
	TS													0	0	2	2

Facility: Shearon Harris		Date of Exam: 1/23/2006		Operating Test No.: NRC													
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M(*)		
		Scenario #1			Scenario #4			N/A			N/A						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P		R	I	U
RO-5	RX		1											1	1	1	0
	NOR						1							1	1	1	1
	I/C		25 79				46 8							7	4	4	2
	MAJ		68				79							4	2	2	1
	TS													0	0	2	2
RO-6	RX					1								1	1	1	0
	NOR			1										1	1	1	1
	I/C			34 9		35								5	4	4	2
	MAJ			68		79								4	2	2	1
	TS													0	0	2	2

Instructions:

- Circle the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must service in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position.
- 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 1-for-1 basis.
- 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 requirements specified for the applicant's license level in the right-hand columns.

Applicant	Applicant
SROU-1 (Fulks)	RO-1 (Bottoms)
SROU-2 (Moore)	RO-2 (Fitzwater)
SROU-3 (Scott)	RO-3 (Jackson)
SROU-4 (Teachey)	RO-4 (Langness)
SROI-1 (MacDougall)	RO-5 (Plummer)
	RO-6 (Stanton)

Facility: Shearon Harris	Date of Examination: 1/23/2006	Operating Test No. NRC															
Competencies	APPLICANTS																
	SRO-U 1				SRO-U 2				SRO-U 3				SRO-U 4				
	SCENARIO				SCENARIO				SCENARIO				SCENARIO				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Interpret/Diagnose Events and Conditions	35 67 89			23 47 89	35 67 89			23 47 89	35 67 89					35 67 89			
Comply With and Use Procedures (1)	All			All	All			All	All					All			
Operate and Control Boards (2)	NA			NA	NA			NA	NA					NA			
Communicate and Interact	All			All	All			All	All					All			
Demonstrate Supervisory Ability (3)	13 56 78 9			12 34 78 9	13 56 78 9			12 34 78 9	13 56 78 9					13 56 78 9			
Comply With and Use Tech. Specs. (3)	34			23	34			23	34					34			
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																	

Instructions:

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

Facility: Shearon Harris	Date of Examination: 1/23/2006	Operating Test No. NRC														
Competencies	APPLICANTS															
	SRO-I 1								RO 1				RO 2			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4					1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	25 67 89			23 47 89					25 67 89			24 67 89	34 78 9			35 78 9
Comply With and Use Procedures (1)	12 35 67 89			All					12 35 67 89			12 46 78 9	13 46 78 9			13 57 89
Operate and Control Boards (2)	12 56 78 9			NA					12 56 78 9			14 67 89	13 46 78 9			13 57 89
Communicate and Interact	All			All					All			All	All			All
Demonstrate Supervisory Ability (3)	NA			12 34 78 9					NA			NA	NA			NA
Comply With and Use Tech. Specs. (3)	NA			23					NA			NA	NA			NA
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																

Instructions:

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

Facility: Shearon Harris	Date of Examination: 1/23/2006		Operating Test No. NRC													
Competencies	APPLICANTS															
	RO 3				RO 4				RO 5				RO 6			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	25 67 89			24 67 89	34 78 9			35 78 9	25 67 89			24 67 89	34 78 9			35 78 9
Comply With and Use Procedures (1)	12 35 67 89			12 46 78 9	13 46 78 9			13 57 89	12 35 67 89			12 46 78 9	13 46 78 9			13 57 89
Operate and Control Boards (2)	12 56 78 9			14 67 89	13 46 78 9			13 57 89	12 56 78 9			14 67 89	13 46 78 9			13 57 89
Communicate and Interact	All			All	All			All	All			All	All			All
Demonstrate Supervisory Ability (3)	N A			N A	NA			NA	NA			NA	NA			NA
Comply With and Use Tech. Specs. (3)	N A			N A	NA			NA	NA			NA	NA			NA
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																

Instructions:

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

Facility: Shearon Harris		Date of Exam: 1/23/2006		Exam Level:	RO/SRO		
Item Description				Initial			
				a	b*	c#	
1. Questions and answers technically accurate and applicable to facility.				PA	AS	CL	
2. a. NRC K/As referenced for all questions. b. Facility learning objectives referenced as available.				PA	AS	CL	
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401				PA	AS	CL	
4. The sampling process was random and systematic. (If more than 4 RO and 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL Program Office)				PA	AS	CL	
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: _____ the audit exam was systematically and randomly developed, or _____ the audit exam was completed before the license exam was started, or _____ the examinations were developed independently, or XX _____ the licensee certifies that there is no duplication, or _____ other (explain)				PA	AS	CL	
6. Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.		Bank	Modified	New	PA	AS	CL
		35 / 17	5 / 1	35 / 17			
7. Between 50 and 60 percent of the question 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		PA	AS	CL
		34 / 3	41 / 22				
8. References/handouts provided do not give away answers or aid in the elimination of distractors.				PA	AS	CL	
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.				PA	AS	CL	
10. Question psychometric quality and format meet the guidelines in ES Appendix B.				PA	AS	CL	
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet.				PA	AS	CL	
Printed Name / Signature				Date			
a. Author	Joseph G. Arsenault			12/21/2005			
b. Facility Reviewer (*)	Artie Sylvester			1-4-06			
c. NRC Chief Examiner (#)	Edwin Lee, Jr.			1-17-06			
d. NRC Regional Supervisor	James H. Moorman, III			1-19-06			
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	6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			

Instructions

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

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
- Check the appropriate box if a psychometric flaw is identified:
 - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - The answer choices are a collection of unrelated true/false statements.
 - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
 - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
- Check the appropriate box if a job content error is identified:
 - The question is not linked to the job requirements (i.e., the question has a valid 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.
- Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
- Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory? At a minimum, explain any "U" ratings (e.g., how the Appendix 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				Back- ward
1	H	2											S	New
2	F	2											S	New
3	F	2											S	New
4	F	2				X							E	New: Distractors A & B do not appear to be plausible for the conditions given. The valve's fail safe position is open. Therefore, I would think that components are designed to operate under these conditions.

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
15	H	3	X			X						E	Bank: Stem should be reworded. Need to look at bus position following trip what position they were in when the work started. Would breakers have to be repositioned in order to perform the work? Are conditions realistic? Distractors may not be plausible.
16	F	2										S	New
17	H	2										S	B
18	F	2										E	New Look at Note 1. It may affect answer.
19	H	3										S	Bank NRC 2004 exam
20	F	2										S	Bank NRC 2004 exam
21	F	2										S	New
22	F	3	X			X						U	Modified: Asking an applicant to identify the "Preferred Method" is not acceptable. As written we there could be several answers.
23	H	3	X	X		X						U	New: Cue in "D" - sweep voids; stem should be rewritten; what makes "C" and "D" totally wrong; what assumptions can the application make concerning level
24	H	3										S	New
25	F	2										E?	Bank: Unable to locate information in LP. Very low level question. Change stem and distractors
26	H	3	X									E	New: Unneeded information in stem. This question appears to ask "What would cause the alarm."
27	H	3	X									E	New: Stem needs to be reworded. Assuming no operator actions, which of the following describes how the PRZ Pressure PORVs and Spray Vales will respond to the current plant conditions.
28	H	2										S?	New: Explain points
29	F	1				X						E	New

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws						4. Job Content Flaws				5. Other		6.	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial Link	Job-Link	Minuta units	#/ units	Backward	Q= K/A	SRO Only	U/E/S		
48	H	3	X											E		Bank: Reword stem to address both 'a' and 'b' of the K/A. Distractors are written to address both
49	H	3												S		New
50	F	3												S?		New: Could distractor 'D' also be correct. If two instrument air compressors are lost, could IAP be maintained above 35 psig?
51	H	3												S		Bank
52	F	2	X											E		New: Which One (1) of the following will automatically occur when a RM.....high alarm is received?
53	F	2												S		Bank
54	H	3												S		Bank
55	H	3												S		Bank
56	H	3			X									S?		Bank: 2003 NRC Exam - Could distractor 'B' also be correct? Need to look at the procedure step and the WOG to determine why the PORV setpoints are raised.
57	F	2												S		Bank
58	H	3	X		X									E		Bank: The question ask for MOST affected. Change stem to: Which ONE (1) of the following describes the parameter affected by the above conditions and how the parameter is affected? Change distractors to indicate direction of change.
59	H	3	X		X									E		New: Which ONE (1) of the following describes the conditions and the actions necessary to reset Containment Isolation Phase A and B given the above conditions? Distractors: A. The operators may reset Phase A and Phase B manually at this by B. The operators may manually reset Phase A at this time. Containment Spray must be reset before resetting Phase B.....
60	F	2												S		Bank
61	H	3			X									E		Modified: As written is it possible for Distractor 'B' to be correct?
62	H	3												S		Bank
63	F	2												S		Bank

[illegible]

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			

Instructions

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

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
- Check the appropriate box if a psychometric flaw is identified:
 - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - The answer choices are a collection of unrelated true/false statements.
 - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
 - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
- Check the appropriate box if a job content error is identified:
 - The question is not linked to the job requirements (i.e., the question has a valid 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.
- Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
- Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
- At a minimum, explain any "U" ratings (e.g., how the Appendix 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				Back- ward
1	H	2	X			X							E	Bank: For the given conditions identify the TS actions that is required to be taken within one hour. Distractor 'D' is not plausible. I do not think there is a TS action associated with stuck control rods that requires the operator shut down the reactor within one hour. (CFR 43)
2	H	3											S?	Bank: Why is Ref not required (CFR 43)

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		
3	F	3				X								E	New: Need to review TS 3.5.1. Given a situation where the accumulator would be used, identify the concerns with a high boron concentration. Why would the operators be concerned with ECCS flow analysis assumptions at this time? What is the affect? (CFR 41.5/45.5 NOT 43)
4	H	2				X								E	New: Change distractors B, C and D. Remove "to initiate RCS boration from B and C." Remove "to shut down the reactor" from D. (CFR 41.7/45.5/45.6 NOT 43.b)
5	H	3												S	Bank: (CFR 41.10/43.2/45.6 – 43.5)
6	H	3												S	New (CFR 43.5/45.12/45.13 – 43.5)
7	H	3												S	Bank: (CFR 43.2/45.2 – 43.2)
8	H	3				X								E/S?	Bank: Should there not be a rise in radial bearing temperature? Look at changing distractor 'C' Power operation may continue if seal injection is maintained between ? & ? ((CFR 45.2/45.6 – 45.5)
9	H	4												S	Bank: (CFR 43.5/45.13 – 45.5)
10	H	4	X			X								U	Modified: Cues are provided in the distractors. Distractors identify Attachment 11, but it should be Attachment 1. Look at modifying the question to make it work. (CFR 41.10/45.13 – 43.2, 5)
11	F	3												S?	Bank: (CFR 45.2/45.6 – 43.5)
12	H	3				X								E	New: Change distractor 'D' (CFR 43.5/45.3/45.12 – 43.5)
13	H	2												S	Bank (CFR 41.10/43.2/45.6 – 43.5)
14	H	3												S	Bank: (CFR 43.5/45.13 – 43.5)
15	H	2				X								E	New: Distractor 'D' is not plausible. (CFR 41.5/43.5/45.3/45.13 – 43.4, 5)
16	H	3				X								E	New: Distractor 'A' could be correct. What alarms would result form the conditions described.? Could these alarms cause you to go to procedure AOP 017? (CFR 41.5/43.5/45.3.45.13 – 43.5)
17	H	2												S	Bank: (CFR 41.10/43.5/45.12 – 43.5)
18	H	3												S	Bank: (CFR 43.5/45.13 – 43.5)
19	H	2												S	Bank: (CFR 41.10/43.5/45.12 – 43.5)

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		
20	F	2												S?	New: Need to look at the statement "crew composition may be one less than the minimum requirements" Could the applicant select his answer based on that note? (CFR 41.10/43.2 – 43.1)
21	F	2				X								E	Bank: Unable to locate this procedure. I would think that conduct of ops procedure might provide more information on how operators are to address temp mods. Distractor 'A' could be correct based operators responsibilities. (CFR 41.10/43.3/45.13 – 43.3)
22	F	2												S	Bank: (CFR 41.12/43.4 – 43.4)
23	F	2												S	Bank: (CFR 43.4/45.10 – 43.4)
24	F	3												S	Bank: 2004 NRC exam
25	H	3												S	Bank: (CFR 41.10/43.5/45.13 – 43.5)

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		
4	F	2				X								S	New: Distractors A & B do not appear to be plausible for the conditions given. The valve's fail safe position is open. Therefore, I would think that components are designed to operate under these conditions. CHANGE DISTRACTOR A: THE OPERATING RHR PUMP WILL CAVITATE
5	H	3	X			X								S	Bank: Need to change stem and distractors. Which one of the following describes the system response after the crew stops one CSJP? RCS break flow remains constant while ECCS flow decreases and subcooling decreases. CHANGED STEM AND DISTRACTORS AS SUGGESTED
6	F	2												S	Bank
7	F	2				X								S	Bank: Could distractor D also be correct. CHANGED STEM
8	F	2				X								S	Bank: Repeat from 2004 exam. Question accepted on 2004 exam with out any problems - Distractors C & D doesn't appear to describe a cooling method. D COULD BE CORRECT: CHANGED DISTRACTOR
9	H	3												S	New
10	F	2												S	New
11	H	3												S	New: MADE CHANGES TO WORDING OF DISTRACTOR A
12	F	2												S	New
13	H	3	X			X								S	Modified: Need to reword stem - Look at changing distractor B & C. Need to look at original question CHANGED DISTRACTORS
14	F	2												S	Bank

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		
15	H	3	X			X						\$	Bank: Stem should be reworded. Need to look at bus position following trip what position they were in when the work started. Would breakers have to be repositioned in order to perform the work? Are conditions realistic? Distractors may not be plausible. CHANGED STEM AND WORDING TO SOME OF THE DISTRACTORS
16	F	2										\$	New
17	H	2										\$	BANK
18	F	2										\$	New Look at Note 1. It may affect answer. NEED TO VERIFY AT PLANT
19	H	3										\$	Bank NRC 2004 exam
20	H	2										\$	Bank NRC 2004 exam
21	F	2										\$	New
22	F	3	X			X						\$	Modified: Asking an applicant to identify the "Preferred Method" is not acceptable. As written we there could be several answers. CHANGED THE STEM - LOW LEVEL
23	H	3	X	X		X						\$	New: Cue in "D" - sweep voids; stem should be rewritten; what makes "C" and "D" totally wrong; what assumptions can the application make concerning CHANGED STEM
24	H	3										\$	New
25	F	2										\$	Bank: Unable to locate information in LP. Very low level question. Change stem and distractors LOOKED AT LESSON PLAN - SD-112. IT IS OK, STILL LOW LEVEL
26	H	3	X									\$	New: Unneeded information in stem. This question appears to ask "What would cause the alarm." CHANGED STEM
27	H	3	X									\$	New: Stem needs to be reworded. Assuming no operator actions, which of the following describes how the PRZ Pressure PORVs and Spray Vales will respond to the current plant conditions. CHANGED STEM

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		
28	H	2										\$	New: Explain points. QUESTION IS OK
29	F	1				X						\$	New QUESTION IS OK
30	H	3										\$	Bank NRC 2002 - Are references required? REFERENCES WILL NOT BE GIVEN
31	H	3				X						\$	New: What would be required if control room outside air intake radiations monitors are inoperable (distractor "B") . Distractor "A" states that no other additional actions required - what about surveillance requirements 4.9.12 MADE CHANGES TO STEM. NOTE 28 IS NOT APPLICABLE.
32	H	2										\$	Bank
33	H	2	X			X						\$	New: The stem provides a cue that Chemistry is taking actions to quantify leak rate, therefore distractor "A" tell one that Chemistry has provided their data point. Other distractors are not plausible. What is the surveys? Other distractors provide alarm only(radiation) CHANGED DISTRACTOR
34	H	2										\$	Bank
35	F	2										\$	New
36	H	3										\$	New
37	F	2										\$	Bank NRC 2004
38	F	2				X						\$	New: Distractor "D" is not plausible CHANGED DISTRACTOR D
39	H	2				X						\$	New: Could "A" be correct OK AS IS. PUMP WILL START
40	F	2	X									\$	Modified: Which ONE (1) of the following describes how to take local control of the 'B' CBP scoop tube actuator? CHANGED STEM
41	H	3										\$	New
42	H	3				X						\$	New: What direction is given the alarm response? Distractors not plausible - 'D' . How do you shut down a standby train? QUESTION IS OK. PLANT WOULD NOT BE SHUTDOWN FOR THE CONDITIONS GIVEN. (S)
43	F	2				X						\$	New: Could distractor 'C' also be correct OK AS IS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
44	H	3												S	Bank
45	F	2												S	New
46	F	2												S	New
47	F	2												S	Bank
48	H	3	X											S	Bank: Reword stem to address both 'a' and 'b' of the K/A. Distractors are written to address both CHANGED STEM
49	H	3												S	New
50	F	3												S	New: Could distractor 'D' also be correct. If two instrument air compressors are lost, could IAP be maintained above 35 psig? CHANGED STEM
51	H	3												S	Bank
52	F	2	X											S	New: Which One (1) of the following will automatically occur when a RM.....high alarm is received? CHANGED STEM
53	F	2												S	Bank REWODED STEM AND DISTRACTORS
54	H	3												S	Bank
55	H	3												S	Bank
56	H	3				X								S	Bank: 2003 NRC Exam - Could distractor 'B' also be correct? Need to look at the procedure step and the WOG to determine why the PORV setpoints are raised. MADE A CHANGE TO THE STEM
57	F	2												S	Bank
58	H	3	X			X								S	Bank: The question ask for MOST affected. Change stem to: Which ONE (1) of the following describes the parameter affected by the above conditions and how the parameter is affected? Change distractors to indicate direction of change. CHANGED STEM AND DISTRACTORS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q=			SRO Only
59	H	3	X			X								\$	New: Which ONE (1) of the following describes the conditions and the actions necessary to reset Containment Isolation Phase A and B given the above conditions? Distractors: A. The operators may reset Phase A and Phase B manually at this by B. The operators may manually reset Phase A at this time. Containment Spray must be reset before resetting Phase B..... AGREED TO LEAVE AS IS
60	F	2												\$	Bank
61	H	3				X								\$	Modified: As written is it possible for Distractor 'B' to be correct? CHANGED DISTRACTOR D
62	H	3												\$	Bank
63	F	2												\$	Bank
64	H	3				X								\$	New: Change distractors 'C' & 'D' - Defeats the automatic open and shut signals to the RHR Pump Miniflow Isolation Valves. Defeats the automatic open and shut signals to the CSIP alternate miniflow isolation valves. CHANGED DISTRACTORS AS REQUESTED
65	F	3												\$	Bank
66	F	2												\$	New
67	F	1				X								\$	Bank: Distractor 'B' is not plausible; Distractor 'D' could be correct CHANGE DISTRACTOR B
68	F	2	X			X								\$	New: Base on the current plant conditions, which One (1) of the following is NOT a task that the RO may direct the STA to perform. What is MIMS CHANGED STEM
69	H	3												\$	Bank
70	F	2												\$	Bank
71	F	2												\$	Modified 2002 NRC Exam This question is typically an ADMIN JPM. LOOKS OK. - CHANGED QUESTION DUE TO OVER LAP WITH JPM
72	F	1			X	X								\$	Bank: Distractors are not plausible. Distractor 'D' could also be correct. ACCORDING TO PLANT PROCEDURE THE QUESTION/STEM/DISTRACTORS ARE CORRECT. LEAVE QUESTION AS IS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other	6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia			

Instructions

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

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
- Check the appropriate box if a psychometric flaw is identified:
 - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - The answer choices are a collection of unrelated true/false statements.
 - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
 - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
- Check the appropriate box if a job content error is identified:
 - The question is not linked to the job requirements (i.e., the question has a valid 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.
- Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
- Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory? At a minimum, explain any "U" ratings (e.g., how the Appendix 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			
1	H	2	X								S	Bank: For the given conditions identify the TS actions that is required to be taken within one hour. Distractor 'D' is not plausible. I do not think there is a TS action associated with stuck control rods that requires the operator shut down the reactor within one hour. (CFR 43) CHANGED DISTRACTOR D
2	H	3									S	Bank: Why is Ref not required (CFR 43) FROM INFORMATION GIVEN SRO SHOULD KNOW 303 ENTRY

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=	SRO K/A		
3	F	3				X								S	New: Need to review TS 3.5.1. Given a situation where the accumulator would be used, identify the concerns with a high boron concentration. Why would the operators be concerned with ECCS flow analysis assumptions at this time? What is the affect? (CFR 41.5/45.5 NOT 43) SRO SHOULD KNOW BASES LEAVE QUESTION AS IS. PROVIDED REFERENCE
4	H	2				X								S	New: Change distractors B, C and D. Remove "to initiate RCS boration from B and C." Remove "to shut down the reactor" from D. (CFR 41.7/45.5/45.6 NOT 43.b) MADE CHANGES AS REQUESTED
5	H	3												S	Bank: (CFR 41.10/43.2/45.6 - 43.5)
6	H	3												S	New (CFR 43.5/45.12/45.13 - 43.5)
7	H	3												S	Bank: (CFR 43.2/45.2 - 43.2)
8	H	3				X								S	Bank: Should there not be a rise in radial bearing temperature? Look at changing distractor 'C'..... Power operation may continue if seal injection is maintained between ? & ? ((CFR 45.2/45.6 - 45.5) OK AS IS
9	H	4												S	Bank: (CFR 43.5/45.13 - 45.5) CHANGED STEM
10	H	4	X			X								S	Modified: Cues are provided in the distractors. Distractors identify Attachment 11, but it should be Attachment 1. Look at modifying the question to make it work. (CFR 41.10/4513 -43.2, 5) CHANGED STEM AND REWORDED DISTRACTORS
11	F	3												S	Bank: (CFR 45.2/45.6 -43.5) CHANGED STEM
12	H	3				X								S	New: Change distractor 'D' (CFR 43.5/45.3/45.12 - 43.5) CHANGED GO-OO5 IN A TO GO-OO6. DISTRACTOR D REMAINED THE SAME
13	H	2												S	Bank (CFR 41.10/43.2/45.6 - 43.5)
14	H	3												S	Bank: (CFR 43.5/45.13 - 43.5)
15	H	2				X								S	New: Distractor 'D' is not plausible. (CFR 41.5/43.5/45.3/45.13 -43.4, 5) CHANGED STEM AND REWORDED DISTRACTOR

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q=	SRO K/A Only		
16	H	3				X								S	New: Distractor 'A' could be correct. What alarms would result form the conditions described.? Could these alarms cause you to go to procedure AOP 017? (CFR 41.5/43.5/45.3.45.13 – 43.5) ADDED WORDS TO THE STEM
17	H	2												S	Bank: (CFR 41.10/43.5/45.12 – 43.5)
18	H	3												S	Bank: (CFR 43.5/45.13 – 43.5)
19	H	2												S	Bank: (CFR 41.10/43.5/45.12 – 43.5)
20	F	2												S	New: Need to look at the statement "crew composition may be one less than the minimum requirements" Could the applicant select his answer based on that note? (CFR 41.10/43.2 – 43.1) CHANGE STEM
21	F	2				X								S	Bank: Unable to locate this procedure. I would think that conduct of ops procedure might provide more information on how operators are to address temp mods. Distractor 'A' could be correct based operators responsibilities. (CFR 41.10/43.3/45.13 – 43.3) LOOKED AT PROCEDURE AND IT SPECIFIED WHAT THE SRO IS RESPONSIBLE FOR.
22	F	2												S	Bank: (CFR 41.12/43.4 – 43.4)
23	F	2												S	Bank: (CFR 43.4/45.10 – 43.4)
24	F	3												S	Bank:
25	H	3												S	Bank: (CFR 41.10/43.5/45.13 – 43.5)

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

	Printed Name/Signature	Date
a. Grader	<i>Mark A. Bates</i> (MB) 2-13-06 <i>Archie Lucky / Archie Lucky</i>	2-6-06
b. Facility Reviewer(*)	<i>Terry Toler / T Toler</i>	2-8-06
c. NRC Chief Examiner (*)	<i>Edwin Lee, Jr. / Edwin Lee, Jr.</i>	2/15/06
d. NRC Supervisor (*)	<i>James H. Moorman, Jr. / James H. Moorman, Jr.</i>	2.15.06

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

Post-Examination Check Sheet	
Facility: Shearon Harris _____ Date of Examination: 1 /23 - 2 /2 /2006 _____	
Task Description	Date Complete
1. Facility written exam comments or graded exams received and verified complete	2/15/2006
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	N/A
3. Operating tests graded by NRC examiners	2/21/2006
4. NRC chief examiner review of operating test and written exam grading completed	2/22/2006
5. Responsible supervisor review completed	3/1 /2006
6. Management (licensing official) review completed	3/1/2006
7. License and denial letters mailed	3/1/2006
8. Facility notified of results	3/1/2006
9. Examination report issued (refer to NRC MC 0612)	3/20/2006
10. Reference material returned after final resolution of any appeals	N/A



January 4, 2006

SERIAL: HNP-06-001

Mr. James H. Moorman, 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 AND SENIOR REACTOR OPERATOR
INITIAL EXAMINATIONS 50-400/2006-301

Dear Mr. Moorman:

Enclosed are revised proposed written examinations for the Reactor and Senior Reactor Operator Initial Examinations to be given at the Harris Nuclear Plant the weeks of January 23 and 30, 2006. This submittal contains proposed written examinations which have been revised following resolution of comments from the NRC Chief Examiner.

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

If you have any questions regarding these materials, please contact Mr. Artie Sylvester at (919) 362-3252.

Sincerely,

A handwritten signature in black ink, appearing to read 'Doug Schroeder'.

Doug Schroeder
Supervisor - Operator Continuing Training
Harris Nuclear Plant

DS/khv

Enclosures

- c: Mr. R. A. Musser (NRC Senior Resident Inspector, HNP) w/o Enclosures
- Dr. W. D. Travers (NRC Regional Administrator, Region II) w/o Enclosures
- Mr. C. P. Patel (NRR Project Manager, HNP) w/o Enclosures