

# Administrative Documents

## NORTH ANNA JUNE EXAM 50-338 & 50-339/2004-301

JUNE 17 - 25, 2004

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

Facility: <u>North Anna</u>		Date of Examination: <u>6/21 - 7/2/2004</u>
Examinations Developed by: <b>Facility</b> / NRC (circle one)		
Target Date*	Task Description / Reference	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	<i>EL</i>
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	<i>EL</i>
-120	3. Facility contact briefed on security & other requirements (C.2.c)	<i>EL</i>
-120	4. Corporate notification letter sent (C.2.d)	<i>EL</i>
[-90]	[5. Reference material due (C.1.e; C.3.c)]	
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	<i>EL</i>
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	<i>EL</i>
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	<i>EL</i>
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	<i>EL</i>
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	<i>EL</i>
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	<i>EL</i>
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	<i>EL</i>
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	<i>EL</i>
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	<i>EL</i>
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	<i>EL</i>
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	<i>EL</i>
<p>* Target dates are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.</p> <p>[ ] Applies only to examinations prepared by the NRC.</p>		

Facility:		Date of Examination:		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	JH	JM	LS
	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.	JH	JM	LS
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	JH	JM	LS
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	JH	JM	LS
2. S I M	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, and major transients.	JH	JM	LS
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; ensure each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s)*, and scenarios will not be repeated on subsequent days.	JH	JM	LS
	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.	JH	JM	LS
3. W / T	a. Verify that: (1) the outline(s) contain(s) the required number of control room and in-plant tasks, (2) no more than 30% of the test material is repeated from the last NRC examination, (3)* no tasks are duplicated from the applicants' audit test(s), and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks.	JH	JM	LS
	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) 4 - 6 (2 - 3 for SRO-U) of the tasks require the applicant to implement an alternate path procedure, (4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and (5) the in-plant walk-through requires the applicant to enter the RCA.	JH	JM	LS
	c. Verify that the required administrative topics are covered.	JH	JM	LS
	d. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	JH	JM	LS
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.	JH	JM	LS
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	JH	JM	LS
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	JH	JM	LS
	d. Check for duplication and overlap among exam sections.	JH	JM	LS
	e. Check the entire exam for balance of coverage.	JH	JM	LS
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	JH	JM	LS
Printed Name / Signature		Date		
a. Author	<i>Tony Yang / John Yang</i>	<i>Denise Tiblis / D. Tiblis</i>	6-14-04	
b. Facility Reviewer (*)	<i>Joseph B. Scott, Jr. / Joseph B. Scott, Jr.</i>		6/14/04	
c. NRC Chief Examiner (#)	<i>Edward L. G. ... / ...</i>		6/15/04	
d. NRC Supervisor	<i>Michael E. ... / ...</i>		6/15/04	
Note: * Not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.				

1. Pre-Examination

6-17 through 7/2/04

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 6-17 through 7/2/04 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 6/17-7/2/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	Bruce Phaup	CRO / <sup>STAFF</sup> ORB	<i>B Phaup</i>	4-22-04	<i>B Phaup</i>	7-1-04
2.	Robert C. Steer	ISOP	<i>Robert C Steer</i>	4/22/04	<i>Robert C Steer</i>	6/29/2004
3.	James Davies	SRD	<i>James Davies</i>	4/22/04	<i>James Davies</i>	7/1/04
4.	CHARLES BAILEY	Boo	<i>Charles Bailey</i>	4-22-04	<i>Charles Bailey</i>	7-17-04
5.	John Rainman	EP Spec. / NAPS EP	<i>John Rainman</i>	04/25/04	<i>John Rainman</i>	04/25/04
6.	Ernest K. Henry	EP Spec. / NAPS EP	<i>Ernest K Henry</i>	04/28/04	<i>Ernest K Henry</i>	6/29/04
7.	Danny Brooks	Security Shift Leader Security	<i>Danny Brooks</i>	4-28-04	<i>Danny Brooks</i>	7/16/04
8.	David Critchfield	Senior Instructor - Nuclear	<i>David Critchfield</i>	4-29-04	<i>David Critchfield</i>	6-24-04
9.	Ashley Royal	Manager Nuclear Training	<i>A. Ashley Royal</i>	5-3-04	<i>A. Ashley Royal</i>	7-6-04
10.	Edward TRASK	INSTRUCTOR	<i>Edward Trask</i>	5-4-04	<i>Edward Trask</i>	07-04
11.	Richard W. Wintley	Sup of Shift Operations	<i>Richard W Wintley</i>	5/15/04	<i>Richard W Wintley</i>	6/21/04
12.	Brenda K. Patrish	Proc test tr	<i>Brenda Patrish</i>	5/12/04	<i>Brenda Patrish</i>	6/23/04
13.	PEGGY D. ANDERSON	CLERICAL / SHREDDER	<i>Peggy D. Anderson</i>	05/12/04	<i>Peggy D. Anderson</i>	06/29/04
14.	RANDALL GARRETT	SENIOR INSTRUCTOR / NAPS OPS	<i>Randall Garrett</i>	5/25/04	<i>Randall Garrett</i>	6/24/04
15.	Alan Dowell	Techn Spec / Misc Eng	<i>Alan Dowell</i>	5/26/04	<i>Alan Dowell</i>	7/1/04

NOTES:

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2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 6/17-11/2/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. Denise Tiblis	Sr. Instructor / Exam Writer	Denise Tiblis	11/24/03	Denise Tiblis	6/25/04
2. <del>TODD YOUNG</del>	<del>INSTRUCTOR / Exam Writer</del>	<del>Todd Young</del>	<del>11/24/03</del>	<del>Todd Young</del>	<del>7/5/04</del>
3. <del>Jane Cochran Ford</del>	<del>Supervisor Operations Support / Reviewer</del>	<del>Jane Cochran Ford</del>	<del>2/3/2004</del>	<del>Jane Cochran Ford</del>	<del>6/29/04</del>
4. Joseph B. Scott	Supervisor Nuclear Training	Joseph B. Scott	2/9/04	Joseph B. Scott	6/29/04
5. ALIAN A. KOZAK	SR SIMULATOR SUPPORT	Alian A. Kozak	3/24/04	Alian A. Kozak	6/29/04
6. SHARAD KUMAR	SR. SIM SUPPORT CORD	Shard Kumar	03/27/04	Shard Kumar	07/10/2004
7. KENNETH W. ELBERT	Senior Simulator Coordinator	Kenneth W. Elbert	03/24/04	Kenneth W. Elbert	6/29/04
8. Matt Hayes	CRO	Matt Hayes	3/24/04	Matt Hayes	6/7/04
9. TRICIA HICKS	Admin	Tricia Hicks	3/21/04	Tricia Hicks	6/24/04
10. CONNIE ARMSTRONG	Admin	Connie Armstrong	3/13/04	Connie Armstrong	6/24/04
11. Lee C. Baron	Senior Instructor	Lee C. Baron	4/15/04	Lee C. Baron	6/28/04
12. Stewart Purvis	NLS Senior Instructor	Stewart Purvis	4/15/04	Stewart Purvis	6/24/04
13. Tim Cosner	BSA-IT	Tim Cosner	4/20/04	Tim Cosner	07/02/04
14. James PADGETT	LAN Admin	James Padgett	4/20/04	James Padgett	7/7/04
15. KULAN DE	EGT	Kulan De	06/02/04	Kulan De	6/29/04

NOTES:

1. Pre-Examination

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2. Post-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	David B. Slankard	Instructor / STA	<i>David B. Slankard</i>	6/21/04	<i>David B. Slankard</i>	6/28/04	
2.	Walt Shura	Supervisor / RO/SIC	<i>Walt Shura</i>	6/22/04	<i>Walt Shura</i>		6/24/04
3.	John Shoemaker	Instructor / Instructor	<i>John Shoemaker</i>	6/22/04	<i>John Shoemaker</i>		6/24/04
4.	Richard Lee Stevens	Instructor / Operations	<i>Richard Lee Stevens</i>	6/29/04	<i>Richard Lee Stevens</i>	6/29/04	
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NOTES:

Facility: North Anna power Station Examination Level (circle one): <b>RO</b> / SRO		Date of Examination: 6/21-7/2/2004 Operating Test Number: 1 _____	
Administrative Topic (see Note)	Describe activity to be performed:		
Conduct of Operations	<b>Evaluate 1/M for Continued Approach to Criticality. Alternate path. Criticality Imminent above ECP Upper Limit. Significantly modified. ( K/A 2.1.23)</b>		
Conduct of Operations	<b>Perform RCS Leakrate Hand Calculation. Modified from Bank. ( K/A 2.1.20)</b>		
Equipment Control	Review work order for attachment to existing tag out. Alternate Path. New JPM. Work Order will not have sufficient boundary and PMT requirements will not be able to be met. ( K/A 2.2.17)		
Radiation Control	<b>Given an Attached Survey, Determine Entry Requirements and Stay Times Associated with a Given Work Activity. New JPM. ( K/A 2.3.4)</b>		
Emergency Plan	<b>Given a Completed Notification Form, Make Required Notifications. Alternate Path. Primary Communication Won't Work and One County Will Have to be Called Separately. ( K/A 2.4.43)</b>		
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.			

Facility: North Anna power Station Examination Level (circle one): RO/ <b>SRO</b>		Date of Examination: 6/21-7/2/2004 Operating Test Number: 1 _____	
Administrative Topic (see Note)	Describe activity to be performed:		
Conduct of Operations	<b>Evaluate 1/M for Continued Approach to Criticality. Alternate path Criticality Imminent above ECP Upper Limit. Significantly modified. (K/A 2.1.23)</b>		
Conduct of Operations	<b>Perform RCS Leakrate Hand Calculation. Modified from Bank. (K/A 2.1.20)</b>		
Equipment Control	<b>Review work order for attachment to existing tag out. Alternate Path. New JPM. Work Order will not have sufficient boundary and PMT requirements will not be able to be met. (K/A 2.2.17)</b>		
Radiation Control	<b>Given an Attached Survey, Determine Entry Requirements and Stay Times Associated with a Given Work Activity. New JPM. (K/A 2.3.4)</b>		
Emergency Plan	<b>Determine EPIP Event Classification Following Scenario. (K/A 2.4.41)</b>		
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.			

Facility: North Anna Power Station		Date of Examination: 6/21-7/2/2004	
Exam Level (circle one): RO / <b>SRO(I)</b> / SRO(U)		Operating Test No.: 1 _____	
Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)			
System / JPM Title	Type Code*	Safety Function	
a. Borate to Cold Shutdown (K/A 004A4.04) (R115 Mod)	(M), (C), (L)	1	
b. Verify SI Flow (K/A 006A2.02)(Alternate path to exercise attachment 6 of E-0 to establish hot leg injection)	(N), (A), (S)	2	
c. Respond to a Loss of RCS Pressure (K/A 010A2.02)(R634 Mod) (1-AP-44) (Spray valve does not close unit will need to be tripped and RCP secured to stabilize pressure)	(M), (A), (S)	3	
d. Respond to a Loss of RHR (K/A 005A2.03) (10820) (1-AP-11)	(D), (A), (S), (L)	4P	
e. Fill the PRT (K/A 007A1.01) (R642) (2-OP-5.7) (Perform on Unit 2)	(D), (C),	5	
f. Sync EDG to Emergency Bus (K/A 064A4.07) (EDG malfunction causes load to increase above limit requiring EDG to be shutdown while loading EDG per 1-PT-82H)	(N), (A), (S)	6	
g. Coordinate Placing a Failed Loop Delta T/ Tave Channel in Test (K/A 012A2.03) (7254) (1-AP-3) (Instrument technician places wrong bistable in test)	(D), (A), (S)	7	
h. Place a Waste Gas Decay Tank on Bleed (K/A 071A4.05) (R717) (0-OP-023.2)	(D), (S),	9	

In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
<b>i. Align Service Water to the AFW Pumps (K/A 054AA1.01) (N1528) (2-AP-22.5) (Perform on Unit 2)</b>	(D), (R)	4S
<b>j. Split Out Component Cooling between Units 1 and 2 (K/A 008A2.02) (N877) (1-AP-15)</b>	(D), (R)	8
<b>k. Locally Dump Steam from Intact Steam Generators (K/A 039A2.04) (New. Designed to exercise RNO of step 12 in 1-E-3) ( Using Decay Heat Release Valve)</b>	(N), (A)	4S
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

Facility: North Anna Power Station

Date of Examination: 6/21-7/2/2004

Exam Level (circle one): **RO** / SRO(I) / SRO(U)

Operating Test No.: 1 \_\_\_\_\_

## Control Room Systems (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)

System / JPM Title	Type Code*	Safety Function
a. Retrieve A Dropped Rod (K/A 003AA1.02) (1-AP-1.2)	(D), (S),	1
b. Verify Si Flow (K/A 006A2.02) (Alternate path to exercise attachment 6 of E-0 to establish hot leg injection)	(N), (A), (S)	2
c. Respond to a Loss of RCS Pressure (K/A 010A2.02) (R634 Mod) (1-AP-44) (Spray valve does not close. Unit will need to be tripped and RCP secured to stabilize pressure)	(M), (A), (S)	3
d. Respond to a Loss of RHR (K/A 005A2.03) (10820) (1-AP-11)	(D), (A), (S), (L)	4P
e. Fill the PRT (K/A 007A1.01) (R642) (2-OP-5.7) (Perform on Unit 2)	(D), (C),	5
f. Sync EDG to Emergency Bus (K/A 064A4.07) (EDG malfunction causes load to increase above limit requiring EDG to be shutdown while loading EDG per 1-PT-82H)	(N), (A), (S)	6
g. Respond to a failure of 1-CH-PT-1145, Low Pressure Letdown Pressure Transmitter (K/A 016A2.03) (Doesn't respond in manual. Needs to place excess letdown in service per 1-OP-8.5.)	(M), (A), (S)	7
h. Transfer Steam Dumps to Steam Pressure Mode (K/A 041A4.04) (R664)	(D), (C),	4S

In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. Align Service Water to the AFW Pumps (K/A 054AA1.01) (N1528) (2-AP-22.5) (Perform on Unit 2)	(D), (R)	4S
j. Split Out Component Cooling between Units 1 and 2 (K/A 008A2.02)  (N877) (1-AP-15)	(D), (R)	8
k. Isolate RCP Seals Locally ( K/A 003A2.01) (N10) ( attachment 3 of ECA 0.0)	(D), (R)	4P
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

Final

Facility: **North Anna** Date of Examination: **6/21-25/04** Operating Test Number:

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).	JK	JK	LS
b. There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JK	JK	LS
c. The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	JK	JK	LS
d. Overlap with the written examination and between different parts of the operating test is within acceptable limits.	JK	JK	LS
e. It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JK	JK	LS

2. WALK-THROUGH	a	b*	c#
a. Each JPM includes the following, as applicable: <ul style="list-style-type: none"> <li>➤ initial conditions</li> <li>➤ initiating cues</li> <li>➤ references and tools, including associated procedures</li> <li>➤ reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee</li> <li>➤ specific performance criteria that include:                             <ul style="list-style-type: none"> <li>- detailed expected actions with exact criteria and nomenclature                                     <ul style="list-style-type: none"> <li>- system response and other examiner cues</li> <li>- statements describing important observations to be made by the applicant</li> <li>- criteria for successful completion of the task</li> <li>- identification of critical steps and their associated performance standards</li> <li>- restrictions on the sequence of steps, if applicable</li> </ul> </li> </ul> </li> </ul>	JK	JK	LS
b. Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.	JK	JK	LS
c. At least 20 percent of the JPMs on each test are new or significantly modified.	JK	JK	LS

3. SIMULATOR CRITERIA	a	b*	c#
a. The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	JK	JK	LS

Printed Name / Signature	Date
a. Author <i>Kevin Young / Holl Young</i>	6/10/04
b. Facility Reviewer(*) <i>Joseph B. Scott / Joseph B. Scott</i>	6/10/04
c. NRC Chief Examiner (#) <i>Edward Lee, Jr. / Edward Lee, Jr.</i>	6/15/04
d. NRC Supervisor <i>Michael E. Ernest / Michael E. Ernest</i>	6/15/2004

NOTE: \* The facility signature is not applicable for NRC-developed tests.  
 # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.

*Final*

Facility: North Anna Power Station    Date of Exam: 6/17/04 – 6/25/04    Scenario Numbers: 1 / 2 / 3    Operating Test No.: 1				
QUALITATIVE ATTRIBUTES		Initials		
		a	b*	c#
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	<i>dfj</i>	<i>JR</i>	<i>62</i>
2.	The scenarios consist mostly of related events.	<i>dfj</i>	<i>JR</i>	<i>62</i>
3.	Each event description consists of <input checked="" type="checkbox"/> the point in the scenario when it is to be initiated <input checked="" type="checkbox"/> the malfunction(s) that are entered to initiate the event <input checked="" type="checkbox"/> the symptoms/cues that will be visible to the crew <input checked="" type="checkbox"/> the expected operator actions (by shift position) <input checked="" type="checkbox"/> the event termination point (if applicable)	<i>dfj</i>	<i>JR</i>	<i>62</i>
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.	<i>dfj</i>	<i>JR</i>	<i>62</i>
5.	The events are valid with regard to physics and thermodynamics.	<i>dfj</i>	<i>JR</i>	<i>62</i>
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	<i>dfj</i>	<i>JR</i>	<i>62</i>
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.	<i>dfj</i>	<i>JR</i>	<i>62</i>
8.	The simulator modeling is not altered.	<i>dfj</i>	<i>JR</i>	<i>62</i>
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	<i>dfj</i>	<i>JR</i>	<i>62</i>
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.	<i>dfj</i>	<i>JR</i>	<i>62</i>
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	<i>dfj</i>	<i>JR</i>	<i>62</i>
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).	<i>dfj</i>	<i>JR</i>	<i>62</i>
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<i>dfj</i>	<i>JR</i>	<i>62</i>
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d)		Actual Attributes		
1.	Total malfunctions (5-8)			7/6/5
2.	Malfunctions after EOP entry (1-2)			2/2/1
3.	Abnormal events (2-4)			5/4/4
4.	Major transients (1-2)			1/1/1
5.	EOPs entered/requiring substantive actions (1-2)			1/1/1
6.	EOP contingencies requiring substantive actions (0-2)			1/0/1
7.	Critical tasks (2-3)			6/4/4

North Anna Power Station

OPERATING TEST NO.: 1

Scenario set 1

Applicant Type	Evolution Type	Minimum Number	Scenario Number							
			1		2		3			
			RO	BOP	RO	BOP	RO	BOP	RO	BOP
RO	Reactivity	1*	2	2	4	4				
	Normal	1*	1		1					
	Instrument / Component	4*	3, 4 b	5, 6 8, 9	2, 3 5, 7	3, 4 5, 8				
	Major	1	7	7	6	6				
As RO	Reactivity	1*	2		4					
	Normal	0	1		1					
	Instrument / Component	2*	3, 4 b		2, 5, 7					
	Major	1	7		6					
SRO-I	Reactivity	0	2		4					
	Normal	1*	1		1					
	Instrument / Component	2*	3, 4, 5, 6, 8, 9,		2, 3, 4, 5, 7, 8					
	Major	1	7		6					
SRO-U	Reactivity	0	2		4					
	Normal	1*	1		1					
	Instrument / Component	2*	3, 4, 5, 6, 8, 9,		2, 3, 4, 5, 7, 8					
	Major	1	7		6					

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

Author:

*Denise H. Tibbitts*

NRC Reviewer:

*Edwin Lee, Jr.*

North Anna Power Station

OPERATING TEST NO.: 1

Spare scenario

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

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

Author:

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NRC Reviewer:

*Edwin L. Jr.*

North Anna Power Station

Scenario set 1

OPERATING TEST NO.: 1

Applicant Type	Evolution Type	Minimum Number	Scenario Number						
			1		2		3(Spare)		
			RO	BOP	RO	BOP	RO	BOP	
RO	Reactivity	1*	2	2	4	4	2	2	
	Normal	1*	1		1			1	
	Instrument / Component	4*	3,4,9	5,6,8,9	2,5,7	3,4,5,7	3,5,6,8	4,6,8	
	Major	1	7	7	6	6	7	7	
As RO	Reactivity	1*	2		4		2		
	Normal	0	1		1		1		
	Instrument / Component	2*	3,4,9		2,5,7		3,5,6,8		
	Major	1	7		6		7		
As SRO	Reactivity	0	2		4		2		
	Normal	1*	1		1		1		
	Instrument / Component	2*	3,4,5,6,8,9		2,3,4,5,7,8		3,4,5,6,8		
	Major	1	7		6		7		
SRO-U	Reactivity	0	2		4		2		
	Normal	1*	1		1		1		
	Instrument / Component	2*	3,4,5,6,8,9		2,3,4,5,7,8		3,4,5,6,8		
	Major	1	7		6		7		

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

Author:

Denise H. Willis

NRC Reviewer:

Eduardo Lopez

North Anna Operating Test 1 June 17 – 25, 2004

Competencies	SRO				RO				BOP			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3		1	2	3		1	2	3	
Interpret / Diagnose Events and Conditions	2,3, 4,5, 6,7, 8,9	2,3, 4,5, 6,7, 8	2,3, 4,5, 6,7, 8		2,3, 4,7, 9	2,4, 5,6, 7	2,3, 5,6, 7,8		2,5, 6,7, 8,9	3,4, 5,6, 8	2,4, 6,7, 8	
Comply With and Use Procedures (1)	1,2, 3,4, 5,6, 7,8, 9	1,2, 3,4, 5,6, 7,8	1,2, 3,4, 5,6, 7,8		1,2, 3,4, 7,9	1,2, 4,5, 6,7	2,3, 5,6, 7,8		2,5, 6,7, 8,9	3,4, 5,6, 8	1,2, 3,4, 5,6, 7,8	
Operate Control Boards (2)					1,2, 3,4, 7,9	1,2, 4,5, 6,7	2,3, 6,7, 8		2,5, 6,7, 8,9	3,4, 5,6, 8	1,2, 4,7, 8	
Communicate and Interact	1,2, 3,4, 5,6, 7,8, 9	1,2, 3,4, 5,6, 7,8	1,2, 3,4, 5,6, 7,8		1,2, 3,4, 7,8	1,2, 3,4, 5,6, 7	2,3, 4,5, 6,7, 8		2,5, 6,7, 8,9	3,4, 5,6, 8	1,2, 4,6, 7,8	
Demonstrate Supervisory Ability (3)	1,2, 3,4, 5,6, 7,8, 9	1,2, 3,4, 5,6, 7,8	1,2, 3,4, 5,6, 7,8									
Comply With and Use Tech. Specs. (3)	3,4, 5	3,4	3,4, 5,6									
Notes:												
(1) Includes Technical Specification compliance for an RO.												
(2) Optional for an SRO-U.												
(3) Only applicable to SROs.												

Instructions:

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

Author: Denise H. Zillis

NRC Reviewer: Edwin Lee, Jr.

Facility: North Anna		Date of Exam: 6/17/04 – 6/25-04			Exam Level: RO/SRO		
Item Description					Initial		
					a	b*	c#
1.	Questions and answers technically accurate and applicable to facility				djt	gpc	6L
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available				djt	gpc	6L
3.	SRO questions are appropriate per Section D.2.d of ES-401				14	gpc	6L
4.	Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process						6L
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input checked="" type="checkbox"/> the examinations were developed independently; or <input type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)				djt	gpc	6L
6.	Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual RO / SRO-only question distribution(s) at right	Bank	Modified	New	djt	gpc	6L
		38 / 7	10 / 14	27 / 14	14		
7.	Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right	Memory		C/A	djt	gpc	6L
		36 / 16		39 / 19	14		
8.	References/handouts provided do not give away answers				djt	gpc	6L
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				djt	gpc	6L
10.	Question psychometric quality and format meet ES, Appendix B, guidelines				djt	gpc	6L
11.	The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet				djt	gpc	6L
Printed Name / Signature					Date		
a.	Author Denise G. Tibbitts / NG Tibbitts / Tom Young / Bob Young				5/27/04		
b.	Facility Reviewer (*) Joseph B. Scott Jr / Joe Scott				5/27/04		
c.	NRC Chief Examiner (#) Edwin Beattie / Edwin Beattie				6/2/04		
d.	NRC Regional Supervisor Michael E. Eroster / Michael E. Eroster				6/2/04		
Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.							

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		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			
<p>Instructions</p> <p>[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]</p> <p>1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.</p> <p>2. Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).</p> <p>3. Check the appropriate box if a psychometric flaw is identified:</p> <ul style="list-style-type: none"> <li>• The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).</li> <li>• The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).</li> <li>• The answer choices are a collection of unrelated true/false statements.</li> <li>• One or more distractors is not credible.</li> <li>• One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).</li> </ul> <p>4. Check the appropriate box if a job content error is identified:</p> <ul style="list-style-type: none"> <li>• 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).</li> <li>• 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).</li> <li>• The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).</li> <li>• The question requires reverse logic or application compared to the job requirements.</li> </ul> <p>5. Check questions that are sampled for conformance with the approved K/A and those that are designated SRO-only (K/A and license level mismatches are unacceptable).</p> <p>6. Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?</p> <p>7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).</p>																
RO/SRO Combined Question																
1													Y		U	This question is a JPM??? <b>This is the way that they usually test this item. It should only take three minutes. Leave as is.</b>
2	H	3											Y		S	002A1.09, Modified
3	F	2	X										Y		E	003AK3.09, Bank; Add power level to stem. <b>Agreed to change. Power level added.</b>

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												X		U	003GG2.2.22, Modified; The K/A is Knowledge of LCO's and Safety Limits. This question is asking the bases for tripping the Rx if an RCP is lost at power. <b>Changed question. OK.</b>
5	F	2	X			X						Y		E	004K2.04, New; Revise stem. Information could provide information to answer SRO Question #8. Distractor "C" should be replaced since the heaters do not have a control switch which makes it implausible. Suggested revision for stem:  <b>The stem was revised</b>
6	H	3										Y		S	005A4.02, New;
7	F	2	X									Y		E	005K1.09, Bank; Change format of stem <b>Changed stem to improve question</b>
8	F	2										Y		S	006K2.04, New
9	F	2										Y		S	007A4.01, New
10	F	2										Y		S	007EK2.02, Bank
11	H	2										Y		S	008AK1.02, Bank
12	F	3										Y		S	008K4.01, 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	Q=K/A	SRO Only			
13	F	2				X							Y		U/E	009EA1.17, Modified; Distractors "B" and "D" not plausible for the conditions given. Also look at distractor "C" <b>Question is replaced. The replacement question is OK.</b>
14	F	2				X							N		U	01GG2.4.31, New; Are we testing the labeling of the switch in this question? K/A does not match <b>Changed stem - Based on .... OK with the change.</b>
15	F	2											Y		S	010K5.02, New
16		1											Y		U	011EG2.4.49, Bank; Distractors not plausible <b>Changed stem such that distractors would be OK.</b>
17	F	2											Y		S	011K6.04, Bank
18	F	2											Y		S	012K2.01, 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	Backward	Q=K/A	SRO Only		
19	H	3	X					X				Y	?	E	012K6.01, Bank; Reword stem - While Unit 1 was operating at 100 percent power "A" loop hot leg RTD failed. Following the failure of the RTD the instrument technician placed 1-RC-TTS-1412B (BS-1) on card C1-421 to Test per ..... None of the expected annunciators were received..... Should this question be SRO only? <b>Based on learning objectives, the licensee consider this question to be applicable to RO applicant. OK.</b>
20	F	2										Y		S	013K4.10, Bank
21	F	2										Y		S	014K4.06, Bank
22	F	3										Y		S	013K4.10, Bank
23	F	3				X								S/E	015G2.1.28, Bank, Could distractor "C" also be correct? <b>Will leave distractors as is based on industry event information and the amount of time it would take to perform a predictive analysis.</b>
24	H	3										Y		S	016A4.01, New
25	F	2				X						Y		E	022K3.01, Modified; Distractor "B" is not plausible given that containment is designed to withstand much higher temperatures  <b>Changed distractor "B". OK</b>

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			
26	F	1											Y		U	024AK1.04, Modified; Distractors not plausible - <b>consider leaving as is</b>
27	F	2				X							Y		E	026A3.02, New; Could distractor "B" be some indication that a system valve is not in the proper position? <b>Closing of the valve will not result in a low flow condition. Therefore, distractor "D" is ok.</b>
28	H	3											Y		S	026K4.09, New
29	F	2											Y		S	027AK3.01, New
30	F	2	X			X									E	029A2.01, New; Information provided in the stem would indicate to the applicant that 1-RMS-RM-126 would cause an isolation to occur. Is it really plausible to expect an isolation to reset without operation action. <b>Based on licensee response, the question can be used.</b>

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			
31	F	2	X	X									Y		E	032AA2.09, New; The stem needs to be reworded. Stating that the "voltage setting is set too high" provides a cue to the applicant  <b>Will leave as is. Licensee provided information/discussion that would support answer. There would be the opposite effect for the immediate range.</b>
32	H	3											Y		S	032AA2.05, New
33	H	3											Y		E	033K3.03, New Distractor analysis does not match the answers. <b>The licensee corrected the analysis.</b>
34	H-F	2											Y		S	038EK1.02, Bank This question is Fundamental since only asking the reason to depressurize the RCS. <b>Changed</b>
35	F	2											Y		S	039K1.07, Bank
36	F	3						X					Y		E	040AK3.04, Bank UFSAR information is usually SRO job. Also, the answer should be revised to say "to prevent a challenge to containment integrity." as discussed in support material. <b>This question is tied to a learning objective. OK</b>
37	H	2											Y		S	051AA1.04, New

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
38	F	2											Y		S	054AA1.03, New
39	H-F	2	X										Y		U/E	055EG2.4.6, Bank Stem says LOCA with core voiding. The strategy documents discuss a loss of all AC only. Need to reword stem. <b>Reworded the stem. OK.</b>
40	F	2		X		X							Y		U/E	055K3.01, Modified Distractor C is not plausible. The discharge of the air ejector swaps on hi rad. Revise answer A since it cues the answer. Say due to non-condensable gases building up. <b>Changed distractor "C" and information in distractor "A".</b>
41	H	2	X										N		E	056A2.04, Bank Change stem to say "Which ONE of the following is correct per 1-AP-31, Loss of Main Feedwater?" This ties question to K/A. Distractor analysis for D is incorrect. <b>Changes made as requested</b>
42	H-F	3											N		U	056AK1.01, Bank K/A is for cooling by natural convection. Not a comprehension level. <b>Based on definition there is not need to change the question. The question address natural circulation, which is the same as natural convention. OK based on information provided.</b>

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			
43	H	3											Y		S	056K1.03, Bank
44													Y		E	057AK3.01, New Add the word "to" after OATC in stem. <b>Change made</b>
45	F	2											Y		S	058AA2.03, Bank
46	H	2											Y		S	059K1.02, Bank Importance factor should be 3.4/3.4
47	H	3											Y		E	061AK2.01, New Is there a procedure for this action? If not then may want to change stem to "...backboards operator <b>could</b> take? <b>Information provided in AP.</b>
48	H-F					X							Y		E	061K5.05, Modified Distractor "D" is not credible since nothing in the stem suggests that the pump was run. Not at comprehension level since only asking for reason hot discharge piping is a concern. <b>Changed stem.</b>
49	H	3											Y		S	062A2.03, Modified
50	F-H	3											Y		E	063A1.01, Bank This is comprehensive level question. Need a period at the end of the stem. <b>Made change</b>
51	H-F	4											Y		S	064K3.03, New This is comprehensive level question.
52	H-F					X							Y		U	065AA2.03, Bank Distractors B and C are not plausible. You would never stop air compressors on a loss of air and the containment isolation valves are normally open. Not at comprehensive level. <b>Will replace question.</b>

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			
53	H	3											Y		S	067AG2.2.22, New K/A number should be changed fro 067AG2.22 to 067AG2.2.22. <b>Changed</b>
54	F	3												N	U	073K3.01, Bank K/A is for loss or malfunction of instrument, not the actions that occur on a valid signal. Suggest revise stem for failure of instrument. <b>Changed stem to make it match K/A.</b>
55	H	2				X							Y		?	075K4.01, Bank No correct answer since the pump doesn't wait for the discharge valve to close prior to de-energizing the pump. <b>Design of valve/pump operation works as the question states. Question is OK.</b>
56	F	3											Y		S	076A4.01, New
57	H	2											N		U	078A3.01, Bank Does not meet IK/A. Question should be about automatic operation of the instrument air system and not about manual actions on loss of air. <b>Replace with a new question.</b>
58	H-F	3											Y		E	078GG2.1.30, New Importance factor needs to be 3.9/3.4. This question is comprehensive level. Change stem to say "may be started" since the compressor starts based on load demand. <b>Stem Changed</b>
59	F	3		X									Y		U/E	086A2.04, Bank The cue in the stem is "operator assigned to perform main steam valve houses operations". Suggest to just say "RCS temperature is controlled by locally _____." <b>Stem changed as suggested.</b>

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			
60	F	3											Y		?	103K4.06, Bank Wording doesn't seem right. The support material talks about the 60 seconds as having no fuel failure and everything staying in containment. Not about a release to the environment. <b>Leave question as is. It matches K/A. This question is OK for RO.</b>
61	F	2											Y		S	G2.1.1, Bank
62	F	2											Y		S	G2.1.20, New
63	F	3						X					Y		U/E	G2.1.22, Modified Not enough information given. Need to indicate Keff and may want to say power is <5%Thermal. <b>Added information as requested.</b>
64	F	3											Y		U	G2.2.2, New Two correct answers as written (A and D). Suggest changing 35% to 50% based on Note for 50%Rx power. <b>Changed distractors to make sure there is only one answer.</b>
65	H	3				X							Y		U/E	G2.2.22, New 15 minute action time for C and D is not credible. Suggest changing to 8 hours since this is part of the completion time also. Should also state in stem that no other LCOs are in effect at this time. The 1 hour surveillance is usually done prior to making the DG inop so that you don't intentionally enter an action statement. <b>Changed time.</b>
66	H	3											Y		S	G2.2.27, Bank
67	H-F	2											Y		S	G2.3.2, New Not at comprehension level.

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			
68	H	3											Y		?	G2.3.9, Bank No correct answer. The recirc fan is on to ensure the rad monitors are operable, not the purge isolation valves. <b>Question is OK based on information provided by licensee.</b>
69	H	3											Y		S	G2.4.15, Bank
70	F	2											Y		S	G2.4.29, Bank
71	H	3											Y		S	WE02EK2.2, Bank
72	H	3		X		X							Y		U/E	WE04EA2.1, Bank Distractor C is not plausible. You would not use a procedure called "LOCA outside containment" to combat a LOCA inside containment. <b>Changed distractor</b>
73	H	3											Y		S	WE05EK2.2, Bank
74	H	3				X							Y		U/E	WE06EA2.2, Bank Distractor C is not plausible. How can keeping an RCP running cause core cooling to degrade further? <b>Changed distractor</b>
75	H	3		X									Y		U/E	WE11EK2.2, Bank Stem question gives answer away. Suggest changing to "why S/G's are depressurized slowly?" <b>Made changes as suggested.</b>
SRO ONLY																

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
1	H	3	X										Y		E	011A2.10, Modified; The stem needs to be changed. You indicate that the current conditions (Unit 1) for two different power levels. The unit can not be at 100 % and 7% at the same time. There appears to be a lot of unnecessary information in the stem. I do not know if the information is there because you were attempting to make the question appear as if it matches the entire K/A or what. <b>Changes made as requested</b>
2	F	3				X							Y		?	G2.4.45, New; Need to make sure there are not two answers
3	H	3	X			X							Y		E	009EA2.23, Modified; This is not a new questions. It appears to be a slightly modified question from a bank <b>Question reworded</b>
4	F	3	X										Y		E	024AG2.1.32, Bank; The stem needs to be changed. As written, the questions cues the applicant as to where he/she should go. <b>Made changes to the stem</b>
5	H	3				X							Y		E	025AG2.2.25, Modified; Distractors not well written. Grammatical errors. <b>Made changes to distractors and corrected errors</b>
6	F	2				X		X					Y		E	029GG2.1.28, Bank; This question is not SRO only. The K/A does not have a 43 reference. The question is merely asking for the signals that will trip purge supply and exhaust valves. This is basic system knowledge. The way the question is worded you could argue that answer A and C are correct since 35 F is less than 65 F. Answer C can be eliminated because if it was correct then A would also be correct and there can't be two correct answers. <b>The question was replaced.</b>

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			
7	H	3	X			X							Y		E	038EA2.09, Bank; Minor changes needed to stem. Look at distractors (three NOTs). <b>Made changes to the stem and revised distractors.</b>
8	H	3	X										Y		E	058AG2.4.4, New; Change Cog Level to C/A since the applicant must analyze that 1H Emergency Bus is de-energized. Modify stem. <b>Stem was modified.</b>
9	H	3	X										Y		S	061A2.02, New; Suggest revising the stem to delete unnecessary information. <b>The stem was revised.</b>
10	H	3											Y		S	062AG2.1.14, New
11	F												Y		S	062GG2.4.31, New
12	F	2				X							Y		E	064GG2.4.49, New; Possible two correct answers. Is there enough information in the stem to suggest which EDG failed to auto start or that there is a possible equipment problem? Step one of the EOP procedures allows starting the EDG. <b>Will select another K/A</b>
13	H	3											Y		S	065AG2.4.4, New
14	H	3	X										Y		E	103A2.05, New; What type of channel is being isolated? ...the Unit Supervisor was reviewing the paperwork associated with the evolution. Based on the above information, the Unit Supervisor should realize that ..... was not performed _____ <b>Changed stem.</b>
15	F	1	X			X							Y		U	G2.1.32, New; This does not appear to be an SRO level question <b>Agreed that question is OK as is.</b>
16	F	2											Y		S	G2.1.7, New
17	F	2											Y		S	G2.2.19, Bank





Facility: North Anna		Date of Exam: June 17, 2004		Exam Level: RO/SRO	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	<i>JW</i>	N/A	<i>tdL</i>		
2. Answer key changes and question deletions justified and documented	N/A	N/A	N/A		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<i>JW</i>	N/A	<i>tdL</i>		
4. Grading for all borderline cases (80 +/- 2% overall and 70 +/- 4% on the SRO-only) reviewed in detail	<i>JW</i>	N/A	<i>tdL</i>		
5. All other failing examinations checked to ensure that grades are justified	<i>JW</i>	N/A	<i>tdL</i>		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	<i>JW</i>	N/A	<i>tdL</i>		

  

	Printed Name / Signature	Date
a. Grader	Timothy Koib <i>Timothy Koib</i>	<i>6/30/04</i>
b. Facility Reviewer(*)	N/A	N/A
c. NRC Chief Examiner (*)	Edwin Lea, Jr. <i>Edwin Lea Jr.</i>	<i>6/30/04</i>
d. NRC Supervisor (*)	<i>B.T. HORRICE</i> <i>B.T. Horrice</i>	<i>6/30/04</i>

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

*NORTH ANNA 2004-301  
JUNE 2004*

Task Description	Date Complete
1. Facility written exam comments or graded exams received and verified complete	6-29-2004
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	6-30-2004
3. Operating tests graded by NRC examiners	6-30-2004
4. NRC Chief examiner review of written exam and operating test grading completed	6-30-2004
5. Responsible supervisor review completed	6-30-2004
6. Management (licensing official) review completed	6-30-2004
7. License and denial letters mailed	7-13-2004
8. Facility notified of results	7-13-2004
9. Examination report issued (refer to NRC MC 0612)	7-19-2004
10. Reference material returned after final resolution of any appeals	N/A