

Facility: <u>Vogle Units 1 &amp; 2</u>		Date of Examination: <u>April 15 – May 3, 2013</u>
Examinations Developed by: <u>Facility</u>		NRC
<u>Written</u> / Operating Test		Written / Operating Test

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	RSB
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	RSB
-120	3. Facility contact briefed on security and other requirements (C.2.c)	RSB
-120	4. Corporate notification letter sent (C.2.d)	RSB
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	RSB
{-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)	RSB
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	RSB
{-45}	8. Proposed examinations (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)	RSB
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	RSB
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	RSB
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	RSB
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	RSB
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	RSB
-7	14. Final applications reviewed; 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)	RSB
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	RSB
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	RSB

\* 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: <u>VOGTLE 1 &amp; 2</u>		Date of Examination: <u>APRIL 2013</u>		
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, in accordance with ES-401.			
	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.		N/A	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.			
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.			
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.	WJ	BW	PSB
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity, 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 that scenarios will not be repeated on subsequent days.	WJ	BW	PSB
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	WJ	BW	PSB
3. W / T	a. Verify that the 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 new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	WJ	BW	PSB
	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	WJ	BW	PSB
	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.	WJ	BW	PSB
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 sections.	WJ	BW	PSB
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	WJ	BW	PSB
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	WJ	BW	PSB
	d. Check for duplication and overlap among exam sections.	WJ	BW	PSB
	e. Check the entire exam for balance of coverage.	WJ	BW	PSB
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	WJ	BW	PSB
a. Author <u>Kenneth Jenkins</u> b. Facility Reviewer (*) <u>GREG WAINWRIGHT</u> c. NRC Chief Examiner (#) <u>RICHARD S. BALDWIN</u> d. NRC Supervisor <u>MALCOLM F. WIAMANN</u>		Printed Name/Signature Date <u>4-9-13</u> <u>4-9-13</u> <u>4/9/2013</u> <u>04/16/13</u>		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines				

Facility: <u>VOGTE 1 &amp; 2</u>		Date of Examination: <u>APRIL 2013</u>		
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, in accordance with ES-401.	<u>MM</u>	<u>N/A</u>	<u>LAB</u>
	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.	<u>MM</u>	<u>N/A</u>	<u>LAB</u>
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	<u>MM</u>	<u>N/A</u>	<u>LAB</u>
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	<u>MM</u>	<u>N/A</u>	<u>LAB</u>
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.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	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 that scenarios will not be repeated on subsequent days.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	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.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
3. W / T	a. Verify that the 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 new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	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	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	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.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
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 sections.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	d. Check for duplication and overlap among exam sections.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	e. Check the entire exam for balance of coverage.	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	<u>MM</u>	<u>LAB</u>	<u>LAB</u>
a. Author: <u>Kenneth Jenkins</u> b. Facility Reviewer (*): <u>GREG WAINWRIGHT</u> c. NRC Chief Examiner (#): <u>RICHARD S. BRUNNEN</u> d. NRC Supervisor: <u>MALCOLM J. WILDMAN</u>		Printed Name/Signature: <u>[Signature]</u> Date: <u>4-9-13</u> <u>4-9-13</u> <u>4/9/2013</u> <u>04/09/13</u>		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines				

VOSTLE H-18 NRC EXAM

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15/13 4/29/13 5/12/13 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 4/15/13 4/29/13 5/14/13. 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. Daniel Manahan	Operations Training Coordinator	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-13-13
2. Robert Dorman	Shift Manager	<i>[Signature]</i>	4-4-13	<i>[Signature]</i>	5-14-13
3. C. Britt Herrington	NPD	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
4. Rodney Delbour	NPD	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
5. Lewis F. Webster	NPD	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
6. Rudolph N. Solomon Jr.	SSS	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
7. Al R. Sweet	SSS	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
8. Luet Rasmussen	SSS	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
9. Perry Tucker	SS-CAPCO	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
10. Donald Sawell	NPD	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
11. William Hagan	OPS TRAINING	<i>[Signature]</i>	4-11-13	<i>[Signature]</i>	5-14-13
12. Stanley Adams	OPS TRAINING	<i>[Signature]</i>	4-15-13	<i>[Signature]</i>	5-15-13
13. Gary Sanderker	OPS TRAINING	<i>[Signature]</i>	4-15-13	<i>[Signature]</i>	5-15-13
14. Jesse Thomas	OPS DIRECTOR	<i>[Signature]</i>	4-17-13	<i>[Signature]</i>	5-15-13
15. Fred Howard	SS/SURROGATE (SCENARIO #4)	<i>[Signature]</i>	4-18-13	<i>[Signature]</i>	5-15-13

NOTES:

ES-201

## Examination Security Agreement

Form ES-201-3

VOSTIC HL-18 NRC EXAM

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15/13 4/22/13 4/29/13 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 4/15/13 4/22/13 4/29/13. 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. Daniel Monahan	Operations Training Coordinator	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-13-13
2. Robert Dorman	Shift Manager	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
3. C. Brett Herrington	NPO	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
4. Rodney Delaney	NPO	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
5. Lewis F. Webster	NPO	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
6. Randolph V. Johnson	OS	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
7. Al R. Sweet	SS	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
8. Janet Rasmussen	SS	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
9. Penny Tucker	SS-CAPCO	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
10. Donald Saville	NPO	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
11. Miguel Hernandez	OPS TRAINING	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-14-13
12. Steven Nease	OPS TRAINING	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-15-13
13. Gary Sandecker	OPS TRAINING	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-15-13
14. Jesse Thomas	OPS DIRECTOR	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-15-13
15. FRED HOWARD	SS / SURVEILLANCE (Steven #4)	<i>[Signature]</i>	4-1-13	<i>[Signature]</i>	5-15-13

NOTES:

# Vogtle HL-18 NRC Exam

2

ES-201

Examination Security Agreement

Form ES-201-3

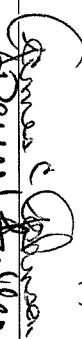

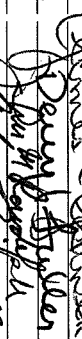
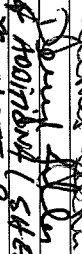
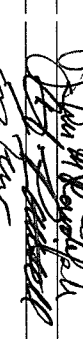
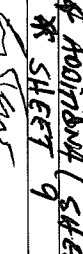

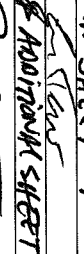

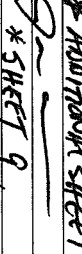




















## 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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 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

4/15/13  
4/29/13 5/6/13

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 4/15, 4/29, 5/6/13. 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. James C. Johnson	Sim Shop Tech		4/15/13		5-13-13
2. Derrill Fuller	Sim Shop Nuclear Spec		1-15-13		5-13-13
3. John M. Randolph	Simulator Engineer		1/15/13		5-13-13
4. C.S. Pitts	SSS		2/18/13		5-13-13
5. Eric Teed	Shift Supervisor		2-18-13		5-28-13
6. Stephen Bissett	NPO		2-19-13		5-14-13
7. Sharon Thomas	NPO		2-19-13		5-14-13
8. Michael D. Walden	NPO		2-27-13		5-14-13
9. Leif Greedy	SSS		2/27/13		5-15-13
10. Sterling Whitman	SSS		3-25-13		5-14-13
11. Christopher Smith	SSS		3-25-13		5-14-13
12. Michael T. Gikas	NPD		3-25-13		5-14-13
13. Phil White	TUG. INST.		3-25-13		5-15-13
14. Kevin J. Lewis	SS		25 APR 13		5/15/13
15. Christopher Domrowski	OBS INST.		30 APR 13		5/13/13

NOTES:

# Vogtle HL-18 NRC Exam

23

ES-201

Examination Security Agreement

Form ES-201-3

## 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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 4/15/13, 4/29/13, 5/6/13. 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. James C Johnson	SimShop I&C Tech	<i>James C Johnson</i>	1/11/13	<i>James C Johnson</i>	5-13-13	
2. Derryl Fuller	SimShop Nuclear Spec	<i>Derryl Fuller</i>	1-15-13	<i>Derryl Fuller</i>	5-13-13	
3. John M. Randolph	Simulator Engineer	<i>John M Randolph</i>	1/15/13			
4. C.S. PATRICK	SSS	<i>C.S. Patrick</i>	2/18/13			* SHEET 9
5. Eric Tew	Shift Supervisor	<i>Eric Tew</i>	2-18-13	<i>Eric Tew</i>	5-28-13	
6. Sharon Greenfield	NPO	<i>Sharon Greenfield</i>	2-19-13	<i>Sharon Greenfield</i>	6/19/13	
7. Sharon Thomas	NPO	<i>Sharon Thomas</i>	2-19-13	<i>Sharon Thomas</i>	5-14-13	
8. Michael D. Walden	NPO	<i>Michael D Walden</i>	2-27-13			* SHEET 9
9. Leif Gordon	SSS	<i>Leif Gordon</i>	2/27/13			* SHEET 10
10. Sterling Whitman	NPO	<i>Sterling Whitman</i>	3-25-13			5-15-13
11. Christopher Smith	SSS	<i>Christopher Smith</i>	03/23/13			5-14-13
12. Michael J. Giles	NPO	<i>Michael J Giles</i>	5-25-13			5-28-13
13. Phil White	TNG. INST.	<i>Phil White</i>	3-25-13			5/15/13
14. Kevin J. Lowe	SS	<i>Kevin J Lowe</i>	25 APR 13			5/15/13
15. Christopher Dymkowski	OBS INST.	<i>Christopher Dymkowski</i>	30 APR 13			5/13/13

NOTES:

# Vogtle HL-18 NRC Exam

ES-201

## Examination Security Agreement

Form ES-201-3

### 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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

4/15/13  
4/29/13  
5/6/13

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 4/15, 4/29, 5/6/13. 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 C. Johnson</u>	<u>SimShop I&amp;E Tech</u>	<u>James C. Johnson</u>	<u>4/15/13</u>	<u>James C. Johnson</u>	<u>5-3-13</u>
2. <u>Derrill Fuller</u>	<u>SimShop Nuclear Spec</u>	<u>Derrill Fuller</u>	<u>4-15-13</u>		
3. <u>John M. Randolph</u>	<u>Simulator Engineer</u>	<u>John M. Randolph</u>	<u>4-15-13</u>	<u>John M. Randolph</u>	<u>5-14-13</u>
4. <u>C.S. PRITZELL</u>	<u>SSS</u>	<u>C.S. PRITZELL</u>	<u>2/13/13</u>		
5. <u>Eric Teed</u>	<u>Shift Supervisor</u>	<u>Eric Teed</u>	<u>2-13-13</u>		
6. <u>Sharon Broadfield</u>	<u>NPO</u>	<u>Sharon Broadfield</u>	<u>2-13-13</u>		
7. <u>Sharon Trowe</u>	<u>NPO</u>	<u>Sharon Trowe</u>	<u>2-14-13</u>		
8. <u>Michael D. Walder</u>	<u>NPO</u>	<u>Michael D. Walder</u>	<u>2-27-13</u>		
9. <u>Leic Gordon</u>	<u>SSS</u>	<u>Leic Gordon</u>	<u>2/27/13</u>		
10. <u>Steflinga W. Johnson</u>	<u>NPO</u>	<u>Steflinga W. Johnson</u>	<u>3-25-13</u>		
11. <u>CHERRY PHILIP SMITH</u>	<u>SSS</u>	<u>CHERRY PHILIP SMITH</u>	<u>03/25/13</u>		
12. <u>Michael T. Cates</u>	<u>NPO</u>	<u>Michael T. Cates</u>	<u>3-25-13</u>		
13. <u>Pat White</u>	<u>TUG. INST.</u>	<u>Pat White</u>	<u>3-25-13</u>		
14. <u>Kevin J. Lowe</u>	<u>SS</u>	<u>Kevin J. Lowe</u>	<u>25 APR 13</u>		
15. <u>CHRISTOPHER DOMAROWSKI</u>	<u>OAS INST.</u>	<u>CHRISTOPHER DOMAROWSKI</u>	<u>30 APR 13</u>	<u>CHRISTOPHER DOMAROWSKI</u>	<u>5/13/13</u>

NOTES:



# Vogtle HL-18 NRC Exam

ES-201

Examination Security Agreement

Form ES-201-3

## 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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 4/15, 4/29, 5/6/13. 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>S. Whinnery</u>	<u>Nuc. Ops. Plant Trng - Lead</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
2. <u>Kenneth Jenkins</u>	<u>Operations Instructor</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
3. <u>Thad N. Thompson</u>	<u>Contract - Exam Writer</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5-16-13</u>
4. <u>Alan Lord</u>	<u>Operations Instructor</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
5. <u>John Acree</u>	<u>Operations Instructor</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
6. <u>John Acree</u>	<u>OPS Training Surv</u>	<u>[Signature]</u>	<u>11/1/12</u>	<u>[Signature]</u>	<u>5/15/13</u>
7. <u>John Acree</u>	<u>OPERATIONS INSTRUCTION</u>	<u>[Signature]</u>	<u>10/12/12</u>	<u>[Signature]</u>	<u>5/15/13</u>
8. <u>CHRIS ERICKSON</u>	<u>NPQ 03 SMC</u>	<u>[Signature]</u>	<u>10/12/12</u>	<u>[Signature]</u>	<u>5/15/13</u>
9. <u>Thad N. Thompson</u>	<u>Simulator Coordinator</u>	<u>[Signature]</u>	<u>1-2-13</u>	<u>[Signature]</u>	<u>5/14/13</u>
10. <u>Jeff Mercer</u>	<u>NPQ on SA. 4</u>	<u>[Signature]</u>	<u>1-9-13</u>	<u>[Signature]</u>	<u>5/13/13</u>
11. <u>DAVID THOMPSON</u>	<u>NPQ</u>	<u>[Signature]</u>	<u>1/9/13</u>	<u>[Signature]</u>	<u>5/15/13</u>
12. <u>ANDREW N. DYER</u>	<u>SSG (SRO)</u>	<u>[Signature]</u>	<u>1/9/13</u>	<u>[Signature]</u>	<u>5/13/13</u>
13. <u>Stacy L Allen</u>	<u>SSS</u>	<u>[Signature]</u>	<u>1/9/13</u>	<u>[Signature]</u>	<u>5/13/13</u>
14. <u>James N. Turner</u>	<u>OPS INSTRUCTOR / SIM INSTRUCTOR</u>	<u>[Signature]</u>	<u>1/9/13</u>	<u>[Signature]</u>	<u>5/13/13</u>
15. <u>Scott M. Landman</u>					

NOTES:

# Vogtle HL-18 NRC Exam

4

ES-201

Examination Security Agreement

Form ES-201-3

## 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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 4/15/13, 4/29/13, 5/6/13. 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>RE Williams</u>	<u>NPD</u>	<u>RE Williams</u>	<u>4/18/13</u>	<u>RE Williams</u>	<u>5-14-13</u>
2. <u>Andrew Rose</u>	<u>NPD</u>	<u>Andrew Rose</u>	<u>4-18-13</u>	<u>Andrew Rose</u>	<u>5-14-13</u>
3. <u>Thomas Russell</u>	<u>SN</u>	<u>Thomas Russell</u>	<u>4-18-13</u>	<u>Thomas Russell</u>	<u>5-14-13</u>
4. <u>Kenneth P. McCall</u>	<u>SS</u>	<u>Kenneth P. McCall</u>	<u>4-18-13</u>	<u>Kenneth P. McCall</u>	<u>5-14-13</u>
5. <u>Steven C. Harris</u>	<u>SS</u>	<u>Steven C. Harris</u>	<u>4-18-13</u>	<u>Steven C. Harris</u>	<u>5-14-13</u>
6. <u>Greg Moxley</u>	<u>NPD</u>	<u>Greg Moxley</u>	<u>4-18-13</u>	<u>Greg Moxley</u>	<u>5-14-13</u>
7. <u>John Stansley</u>	<u>Sec</u>	<u>John Stansley</u>	<u>4-18-13</u>	<u>John Stansley</u>	<u>5-14-13</u>
8. <u>Angi McCall</u>	<u>Ops IT</u>	<u>Angi McCall</u>	<u>4-30-13</u>	<u>Angi McCall</u>	<u>5-14-13</u>
9.					
10.					
11.					
12.					
13.					
14.					
15.					

NOTES:

# Vogtle HL-18 NRC Exam

ES-201

Examination Security Agreement

Form ES-201-3

## 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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 4/15 to 5/13/13 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>Sally Obenshede</u>	<u>Lead Instructor Exam Dev-Facility</u>	<u>[Signature]</u>	<u>2/12/13</u>	<u>[Signature]</u>	<u>5-13-13</u>
2. <u>Billy Thornton</u>	<u>Plant Facility Ops Instructor</u>	<u>[Signature]</u>	<u>2-13-13</u>	<u>[Signature]</u>	<u>5-13-13</u>
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____	_____

NOTES:

# Vogtle HL-18 NRC Exam

6

ES-201

Examination Security Agreement

Form ES-201-3

## 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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

4/15/13  
4/29/13 5/6/13

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 4/15/13. 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. James C. Johnson	SimShop Tech	James C. Johnson	4/11/13	James C. Johnson	5-3-13
2. Derryl Fuller	SimShop Nuclear Spec	Derryl Fuller	4-15-13		
3. John M. Randolph	Simulator Engineer	John M. Randolph	4-15-13		
4. C.S. Prosser	SSS	C.S. Prosser	4/18/13		
5. Eric Tread	Shift Supervisor	Eric Tread	4-18-13		
6. Shawn Greenfield	NRD	Shawn Greenfield	2-19-15		
7. Sharon Thomas	NRD	Sharon Thomas	2-19-15		
8. Michael D. Walden	NRD	Michael D. Walden	2-27-13		
9. Legie Green	SSS	Legie Green	2/27/13		5/13/13
10. Sterling W. Johnson	NRD	Sterling W. Johnson	3-25-13		
11. Charles P. Smith	SSS	Charles P. Smith	03/25/13		
12. Michael T. Calkins	NRD	Michael T. Calkins	3-25-13		
13. Paul M. H. H.	TUG. INST.	Paul M. H. H.	3-25-13		
14. Kevin J. Lowe	SS	Kevin J. Lowe	25 APR 13		
15. Charles R. Moore	0.85 INST.	Charles R. Moore	30 APR 13		5/13/13

NOTES:

# Vogtle HL-18 NRC Exam

7

ES-201

## Examination Security Agreement

Form ES-201-3

### 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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 4/15, 4/29, 5/6/13. 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. G. Wainwright	Nuc. Ops. Plant Mgr - LEAD	<i>G. Wainwright</i>	7/23/12	<i>G. Wainwright</i>	5/13/13	
2. Kenneth Jenkins	Operations Instructor	<i>Kenneth Jenkins</i>	7/23/12	<i>Kenneth Jenkins</i>	5/13/13	
3. Chad N. Thompson	Contract - Exam Writer	<i>Chad N. Thompson</i>	7/23/12	<i>Chad N. Thompson</i>	5/13/13	
4. Alfred Lewis	Operations Instructor	<i>Alfred Lewis</i>	7/23/12	<i>Alfred Lewis</i>	5/13/13	
5. Curtis Talley	Operations Instructor	<i>Curtis Talley</i>	7/23/12	<i>Curtis Talley</i>	5/13/13	
6. David Haughey	NPD	<i>David Haughey</i>	7/23/12	<i>David Haughey</i>	5/13/13	
7. Tom H. Coker	Ops Training Co. Supv	<i>Tom H. Coker</i>	7/23/12	<i>Tom H. Coker</i>	5/13/13	
8. Chris Erickson	Operations Instructor	<i>Chris Erickson</i>	7/23/12	<i>Chris Erickson</i>	5/13/13	
9. Marjorie Miller	NPD on Site	<i>Marjorie Miller</i>	7/23/12	<i>Marjorie Miller</i>	5/13/13	
10. Jeff Mercer	Simulator Coordinator	<i>Jeff Mercer</i>	7/23/12	<i>Jeff Mercer</i>	5/13/13	
11. James Thompson	NPD on Site	<i>James Thompson</i>	7/23/12	<i>James Thompson</i>	5/13/13	
12. Andrew N. York	NPD	<i>Andrew N. York</i>	7/23/12	<i>Andrew N. York</i>	5/13/13	
13. Sidney L. Allen	SSS (SRO)	<i>Sidney L. Allen</i>	7/23/12	<i>Sidney L. Allen</i>	5/13/13	
14. James N. Tipton	SSS	<i>James N. Tipton</i>	7/23/12	<i>James N. Tipton</i>	5/13/13	
15. Scott H. Landmann	Ops Mgr/Work Team Leader	<i>Scott H. Landmann</i>	7/23/12	<i>Scott H. Landmann</i>	5/13/13	

NOTES:

# Vogtle HL-18 NRC Exam

ES-201

Examination Security Agreement

Form ES-201-3

## 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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 4/15, 4/29, 5/6/13. 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>G. Wainwright</u>	<u>Nuc. Ops. Plant Instr - LEAD</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
2. <u>Kenneth Jenkins</u>	<u>Operations Instructor</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
3. <u>Thad N. Thompson</u>	<u>Contact - Exam Writer</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
4. <u>Alan Lowe</u>	<u>Operations Instructor</u>	<u>[Signature]</u>	<u>7/23/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
5. <u>Curry Talley</u>	<u>Operations Instructor</u>	<u>[Signature]</u>	<u>7/20/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
6. <u>David Hawkes</u>	<u>NPO</u>	<u>[Signature]</u>	<u>10/16/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
7. <u>Tom Acres</u>	<u>Ops Training Supv</u>	<u>[Signature]</u>	<u>11/1/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
8. <u>Chris Erickson</u>	<u>Operations Instructor</u>	<u>[Signature]</u>	<u>12/12/12</u>	<u>[Signature]</u>	<u>5/13/13</u>
9. <u>Harvey Miller</u>	<u>NPO o.d. S.A.F.</u>	<u>[Signature]</u>	<u>1/20/13</u>	<u>[Signature]</u>	<u>5/13/13</u>
10. <u>Teff Mercer</u>	<u>Simulator Coordinator</u>	<u>[Signature]</u>	<u>1-2-13</u>	<u>[Signature]</u>	<u>5-13-13</u>
11. <u>Salvatore Thompson</u>	<u>NPO on shift</u>	<u>[Signature]</u>	<u>1-9-13</u>	<u>[Signature]</u>	<u>5-13-13</u>
12. <u>Andrew N. Dyer</u>	<u>NPO</u>	<u>[Signature]</u>	<u>1/9/13</u>	<u>[Signature]</u>	<u>5-13-13</u>
13. <u>Sunny L Allen</u>	<u>SSS (SRA)</u>	<u>[Signature]</u>	<u>5/9/13</u>	<u>[Signature]</u>	<u>5/13/13</u>
14. <u>James N. Timmer</u>	<u>SSS</u>	<u>[Signature]</u>	<u>11/9/13</u>	<u>[Signature]</u>	<u>5/13/13</u>
15. <u>Scott H. Landman</u>	<u>Ops Instructor / Sim Engineer</u>	<u>[Signature]</u>	<u>1/9/13</u>	<u>[Signature]</u>	<u>5/13/13</u>

NOTES:

# Vogtle HL-18 NRC Exam

ES-201

Examination Security Agreement

Form ES-201-3

## 1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/15, 4/29, 5/6/13 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 4/15/13, 4/29/13, 5/6/13. 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. James C. Johnson	SimShop Inc Tech	<i>James C. Johnson</i>	4/11/13	<i>James C. Johnson</i>	5-13-13
2. Derrill Fuller	SimShop Nuclear Spec	<i>Derrill Fuller</i>	4-19-13	<i>James C. Johnson</i>	
3. John M. Randolph	Simulator Engineer	<i>John M. Randolph</i>	4/15/13		
4. C.S. PRIZELL	SSS	<i>C.S. PRIZELL</i>	2/18/13	<i>C.S. PRIZELL</i>	5/13/13
5. Eric T. Taylor	Shift Supervisor	<i>Eric T. Taylor</i>	2-19-13		
6. SARAH BAKERFIELD	NPD	<i>Sarah Bakerfield</i>	2-19-13		
7. Sharon Thomas	NPD	<i>Sharon Thomas</i>	2-19-13		
8. Michael D. Walden	NPD	<i>Michael D. Walden</i>	2-19-13		
9. Leic Gordon	SSS	<i>Leic Gordon</i>	2-27-13	<i>Michael D. Walden</i>	5/13/13
10. Sterling Whitman	NPD	<i>Sterling Whitman</i>	2/27/13		
11. Christopher Smith	SSS	<i>Christopher Smith</i>	3-25-13		
12. Michael J. Giles	NPD	<i>Michael J. Giles</i>	03/25/13		
13. Phil White	TNG. INST.	<i>Phil White</i>	3-25-13		
14. Kevin J. Lowe	SS	<i>Kevin J. Lowe</i>	25 APR 13		
15. CHARLES FREDERICK DUNBAROWSKI	OPS INST.	<i>Charles Frederick Dunbarowski</i>	30 APR 13	<i>Charles Frederick Dunbarowski</i>	5/13/13

NOTES:

# FINAL

ES-301

## Administrative Topics Outline

Form ES-301-1

Facility: <u>Vogtle 1 &amp; 2</u>		Date of Examination: <u>04/15/2013</u>
Examination Level: RO <input checked="" type="checkbox"/> SRO		Operating Test Number: <u>2013-301</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations (a)	R, M	<p>V-NRC-JP-14915-HL18</p> <p><b>Calculate Quadrant Power Tilt Ratio</b></p> <p><b>Description:</b> With data provided, candidate will perform 14915-1, Data Sheet 7, for QPTR monitoring.</p> <p>G2.1.7 (4.4 / 4.7)</p>
Conduct of Operations (b)	R, M	<p>V-NRC-JP-00012-HL18</p> <p><b>Identify On-Shift Manning Requirements for Conditions Provided</b></p> <p><b>Description:</b> Candidate will determine if the minimum on-shift staffing requirements are met and will determine if a crew member can fulfill two specific ERO positions.</p> <p>G2.1.5 (2.9* / 3.9)</p>
Equipment Control (c)	R, N	<p>V-NRC-JP-14825-HL18</p> <p><b>Evaluate Surveillance Test Data</b></p> <p><b>Description:</b> Candidate will evaluate quarterly valve test surveillance data and determine if the required acceptance criteria are met.</p> <p>G2.2.12 (3.7 / 4.1)</p>
Radiation Control (d)	R, D, P	<p>V-NRC-JP-00930-HL18</p> <p><b>Proper RWP Implementation</b></p> <p><b>Description:</b> Candidate will determine proper protective clothing requirements, projected dose, and whether the RWP is appropriate for the job task.</p> <p>G2.3.7 (3.5 / 3.6)</p>
Emergency Procedures/Plan (e)	N/A	N/A
<p><b>NOTE:</b> All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.</p>		



\* Type Codes & Criteria:

(C)ontrol room, (S)imulator, or Class(R)oom

(D)irect from bank ( $\leq 3$  for ROs;  $\leq 4$  for SROs & RO retakes)

(N)ew or (M)odified from bank ( $\geq 1$ )

(P)revious 2 exams ( $\leq 1$ ; randomly selected)

# FINAL

ES-301

## Administrative Topics Outline

Form ES-301-1

Facility: <u>Vogtle 1 &amp; 2</u>		Date of Examination: <u>04/15/2013</u>
Examination Level: RO      SRO <input checked="" type="checkbox"/> SROU <input checked="" type="checkbox"/>		Operating Test Number: <u>2013-301</u>

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations (a)	R, M	<p>V-NRC-JP-14915-HL18</p> <p><b>Evaluate Quadrant Power Tilt Ratio</b></p> <p><b>Description:</b> With data provided, candidate will perform 14915-1, Data Sheet 7, for QPTR monitoring, evaluate data, and take appropriate action.</p> <p>G2.1.7 (4.4 / 4.7)</p>
Conduct of Operations (b)	R, M	<p>V-NRC-JP-00012-HL18</p> <p><b>Evaluate On-Shift Manning Requirements for Conditions Provided</b></p> <p><b>Description:</b> Candidate will determine if the minimum on-shift staffing requirements are met and identify required actions any time minimum staffing requirements are not met.</p> <p>G2.1.5 (2.9* / 3.9)</p>
Equipment Control (c)	R, N	<p>V-NRC-JP-14825-HL18</p> <p><b>Evaluate Surveillance Test Data</b></p> <p><b>Description:</b> Candidate will evaluate quarterly valve test surveillance data, determine if the required acceptance criteria are met, and specify Technical Specification required actions.</p> <p>G2.2.12 (3.7 / 4.1)</p>
Radiation Control (d)	R, D, P	<p>V-NRC-JP-00930-HL18</p> <p><b>Proper RWP Implementation</b></p> <p><b>Description:</b> Candidate will determine proper protective clothing requirements, projected dose, and whether the RWP is appropriate for the job task.</p> <p>G2.3.7 (3.5 / 3.6)</p>

Emergency Procedures/Plan (e)	R, D	<p>V-NRC-JP-NMP-EP-112-HL18</p> <p><b>Determine Offsite Protective Action Recommendations</b></p> <p><b>Description:</b> The candidate will determine PARs for the given emergency and complete the PAR Worksheet.</p> <p>G2.4.44 (4.4)</p>
<p>NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.</p>		
<p>* Type Codes &amp; Criteria:</p> <p>(C)ontrol room, (S)imulator, or Class(R)oom</p> <p>(D)irect from bank (<math>\leq 3</math> for ROs; <math>\leq 4</math> for SROs &amp; RO retakes)</p> <p>(N)ew or (M)odified from bank (<math>\geq 1</math>)</p> <p>(P)revious 2 exams (<math>\leq 1</math>; randomly selected)</p>		

Facility: <u>Vogtle 1 &amp; 2</u>		Date of Examination: <u>04/15/2013</u>
Exam Level: RO <input checked="" type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input checked="" type="checkbox"/>		Operating Test Number: <u>2013-301</u>
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
<p>a. <b>V-NRC-JP-13105-HL18: Increase Accumulator Level at Low RCS Pressure</b></p> <p><b>Description:</b> The unit is in Mode 4 at 340 psig and stable. A leak on Accumulator #2 has been repaired, but low pressure and low level annunciators remain lit. The candidate is directed to restore Accumulator #2 level and pressure sufficiently to clear the low level and low pressure annunciators using 13105-1.</p> <p>(RO / SRO-I / SRO-U)</p> <p>006A1.13 (3.5 / 3.7)</p>	D, EN, L, S	3
<p>b. <b>V-NRC-JP-13011-HL18: Perform an RCS Cooldown Using RHR Train A</b></p> <p><b>Description:</b> A unit cooldown from Mode 4 to Mode 5 is in progress. RHR Train 'A' warm-up is complete. The candidate is directed to initiate full RHR Train 'A' flow and cool down the RCS to 315°F ± 5°F without exceeding 100°F in any hour.</p> <p>(RO / SRO-I / SRO-U)</p> <p>005A4.01 (3.6 / 3.4)</p>	D, L, S	4P
<p>c. <b>V-NRC-JP-18009-HL18: Transfer Steam Dumps to Steam Pressure Mode</b></p> <p><b>Description:</b> The reactor has been shut down due to a steam generator tube leak. The candidate will transfer steam dumps to the steam pressure mode using 18009-C, but they will not control properly and ARV usage will be required to control heat-up.</p> <p>(RO / SRO-I / SRO-U)</p> <p>039A2.04 (3.4 / 3.7)</p>	A, D, L, S	4S

<p>d. <b>V-NRC-JP-13009-HL18: Emergency Borate from the RWST</b></p> <p><b>Description:</b> The candidate will be required to initiate an emergency boration in response to a ROD BANK LO-LO LIMIT alarm using 13009-1. The RWST flow path will be required for emergency boration due to equipment failures.</p> <p>(RO / SRO-I)</p> <p>024AA2.01 (3.8* / 4.1)</p>	A, D, P, S	1
<p>e. <b>V-NRC-JP-19001-HL18: Establish Safety Grade Letdown</b></p> <p><b>Description:</b> The unit was manually tripped due to a non-isolable instrument air break. Candidate is required to place safety grade letdown in service and establish a 40 gpm flow rate to control RCS inventory.</p> <p>(RO / SRO-I)</p> <p>004A2.11 (3.6 / 4.2)</p>	D, L, P, S	2
<p>f. <b>V-NRC-JP-13130-HL18: Place Containment Hydrogen Monitors in Service</b></p> <p><b>Description:</b> A LOCA has occurred and the candidate is directed to place the Containment Hydrogen Monitors in service using 13130-1. The Common Failure light will illuminate requiring the candidate to return the monitor to standby.</p> <p>(RO / SRO-I)</p> <p>028A4.03 (3.1 / 3.3)</p>	A, EN, L, M, P, S	5
<p>g. <b>V-NRC-JP-13320-HL18: Post-Accident Cleanup of the FHB Using the Normal Exhaust Units</b></p> <p><b>Description:</b> A spent fuel assembly was dropped in the Spent Fuel Pool. To expedite cleanup of airborne radioactivity, the candidate will be required to use 13320-C to perform post-accident clean up of the Fuel Handling Building using the normal exhaust units.</p> <p>(RO / SRO-I)</p> <p>034A2.01 (3.6 / 4.4)</p>	N, S	8

h. <b>V-NRC-JP-13830-HL18: Establish Field Excitation Using Manual Voltage Regulation for Main Generator</b>  <b>Description:</b> The unit is starting up following a refueling outage. The main turbine is at 1800 rpm and main generator / exciter preparations are complete. The candidate will use 13830-1 to establish main generator field excitation with manual voltage regulation.  (RO)  062A4.04 (2.6)	D, S	<b><u>RO ONLY</u></b>  6
---	------	--------------------------------

In-Plant Systems® (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. <b>V-NRC-JP-13903-HL18: Locally Emergency Start Diesel-Driven Fire Pump</b>  <b>Description:</b> With a diesel fire pump tagged out for repairs, a large fire caused fire header pressure to drop. The standby diesel fire pump failed to start, so the candidate will be dispatched to perform a local manual start of the standby diesel fire pump. The local pushbutton start for the first battery will not work, which will require the use of the second battery to start the engine.  (RO / SRO-I / SRO-U)  086A2.02 (3.0 / 3.3)	A, D, E	8
<b>ALTERNATE i: V-NRC-JP-13509-HL18: Bypass Containment High-1 Following a Loss of Heat Sink</b>  <b>Description:</b> During a loss of heat sink, the restoration of feed water is required with containment pressure greater than the High-1 setpoint. The candidate will be required to bypass containment high-1 pressure channels 1-PB936B and 1-PB935B using procedure 13509-C.  (RO / SRO-I / SRO-U)  012A4.03 (3.6 / 3.6)	C, D, EN, L	7
j. <b>V-NRC-JP-17213-HL18: Respond to 1-RE-0018 Alarm During a Liquid Radwaste Release Unit 1 OR ALTERNATE j on Unit 2:</b>  <b>Description:</b> During a liquid radwaste release, a high alarm is received on 1-RE-0018. The candidate will be directed to respond to the Waste Process Liquid Panel (PLPP) and take the appropriate actions per 17213-1. 1-RE-0018 will not close, so manual isolation will be required.  (RO / SRO-I / SRO-U)  059AA2.05 (3.6 / 3.9)	A, E, M, R	9

<p>k. <b>V-NRC-JP-18038-HL18: Start Emergency Diesel Generator From Outside the Control Room Unit 2 or <i>ALTERNATE k: Same JPM on Unit 1.</i></b></p> <p><b>Description:</b> The control room has been evacuated and control has been established at the shutdown panels. To re-energize 2AA02, the candidate will locally start 2A EDG using Attachment B of 18038-2. After starting, high jacket water temperature will require tripping the diesel locally.</p> <p>(RO / SRO-I)</p> <p>064A1.03 (3.2 / 3.3) <b>ALTERNATE k:</b></p>	A, E, L, N	6
<p><b>ALTERNATE k: V-NRC-JP-18038-1-HL18: Locally Energize Train A Switchgear Following Local Diesel Start</b></p> <p><b>Description:</b> The control room has been evacuated and control has been established at the shutdown panels. DG1A has been locally started. The candidate will locally energize Unit 1, Train 'A' 4160 VAC and 480 VAC buses using Attachment B of 18038-1.</p> <p>(RO / SRO-I)</p> <p>062A2.05 (2.9 / 3.3*)</p>	D, E, L	6
<p>@ 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.</p>		
* Type Codes	Criteria for RO / SRO-I / SRO-U	
(A)lternate path (C)ontrol room (D)irect from bank (E)mergency or abnormal in-plant (EN)gineered safety feature (L)ow-Power / Shutdown (N)ew or (M)odified from bank including 1(A) (P)revious 2 exams (R)CA (S)imulator	4-6 / 4-6 / 2-3  $\leq 9 / \leq 8 / \leq 4$ $\geq 1 / \geq 1 / \geq 1$ - / - / $\geq 1$ (control room system) $\geq 1 / \geq 1 / \geq 1$ $\geq 2 / \geq 2 / \geq 1$ $\leq 3 / \leq 3 / \leq 2$ (randomly selected) $\geq 1 / \geq 1 / \geq 1$	

Facility: <u>VOGTLE 1 &amp; 2</u>		Date of Examination: <u>4/2013</u>		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).	<u>ML</u>	<u>qdy</u>	<u>MS</u>	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	<u>ML</u>	<u>qdy</u>	<u>MS</u>	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	<u>ML</u>	<u>qdy</u>	<u>MS</u>	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	<u>ML</u>	<u>qdy</u>	<u>MS</u>	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	<u>ML</u>	<u>qdy</u>	<u>MS</u>	
2. Walk-Through Criteria			--	--	--
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>• operationally important specific performance criteria that include: <ul style="list-style-type: none"> <li>– detailed expected actions with exact criteria and nomenclature</li> <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>	<u>ML</u>	<u>qdy</u>	<u>MS</u>	
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.	<u>ML</u>	<u>qdy</u>	<u>MS</u>	
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.			<u>ML</u>	<u>qdy</u>	<u>MS</u>
Printed Name / Signature		Date			
a.	Author <u>ALLAN LOWE</u>	<u>4/8/13</u>			
b.	Facility Reviewer(*) <u>Kenneth Jenkins</u>	<u>04/08/13</u>			
c.	NRC Chief Examiner (#) <u>RICHARD S. BALOWIN</u>	<u>4/09/2013</u>			
d.	NRC Supervisor <u>MALCOLM T. WIDMANN</u>	<u>04/11/13</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					



Facility: Vogtle 1 & 2		Date of Exam: 4-15, 4-22, 5-06 Scenario Numbers: 1 / 2 / 3 Operating Test No.: 2013-301		
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.	HL	qsf	pas
2.	The scenarios consist mostly of related events.	HL	qsf	pas
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	HL	qsf	pas
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.	HL	qsf	pas
5.	The events are valid with regard to physics and thermodynamics.	HL	qsf	pas
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	HL	qsf	pas
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.	HL	qsf	pas
8.	The simulator modeling is not altered.	HL	qsf	pas
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.	HL	qsf	pas
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.	HL	qsf	pas
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	HL	qsf	pas
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).	HL	qsf	pas
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	HL	qsf	pas
<b>Target Quantitative Attributes (Per Scenario; See Section D.5.d)</b>		<b>Actual Attributes</b>		
1.	Total malfunctions (5-8)	10 / 9 / 10	HL	qsf
2.	Malfunctions after EOP entry (1-2)4	4 / 3 / 3	HL	qsf
3.	Abnormal events (2-4)	4 / 5 / 4	HL	qsf
4.	Major transients (1-2)	1 / 1 / 1	HL	qsf
5.	EOPs entered/requiring substantive actions (1-2)	1 / 2 / 2	HL	qsf
6.	EOP contingencies requiring substantive actions (0-2)	0 / 0 / 0	HL	qsf
7.	Critical tasks (2-3)	3 / 3 / 3	HL	qsf

Facility: Vogtle 1 & 2		Date of Exam: 4-15, 4-22, 5-06 Scenario Numbers: 4 / 5 / Operating Test No.: 2013-301		
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.	HL	afg	pas
2.	The scenarios consist mostly of related events.	HL	afg	pas
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	HL	afg	pas
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.	HL	afg	pas
5.	The events are valid with regard to physics and thermodynamics.	HL	afg	pas
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	HL	afg	pas
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.	HL	afg	pas
8.	The simulator modeling is not altered.	HL	afg	pas
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.	HL	afg	pas
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.	HL	afg	pas
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	HL	afg	pas
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).	HL	afg	pas
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	HL	afg	pas
<b>Target Quantitative Attributes (Per Scenario; See Section D.5.d)</b>		<b>Actual Attributes</b>		
1.	Total malfunctions (5-8)	9 / 10 /	HL	afg
2.	Malfunctions after EOP entry (1-2)4	3 / 4 /	HL	afg
3.	Abnormal events (2-4)	4 / 5 /	HL	afg
4.	Major transients (1-2)	2 / 1 /	HL	afg
5.	EOPs entered/requiring substantive actions (1-2)	2 / 2 /	HL	afg
6.	EOP contingencies requiring substantive actions (0-2)	2 / 0 /	HL	afg
7.	Critical tasks (2-3)	3 / 2 /	HL	afg

Facility: Vogtle 1 and 2		Date of Exam: 4-15-13, 4-29-13, 5-6-13									Operating Test No.: 2013-301						
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 (*)		
		1			2			3			4						
		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 <input type="checkbox"/>	RX	2			6			1			5			4	1	1	0
SRO-I <input type="checkbox"/>	NOR	1			3			2						3	1	1	1
<input checked="" type="checkbox"/> SRO-U	I/C	3,4,5, 6,7,9, 10,11 12			1,2,4, 5,8,9, 10			3,4,6, 7,8,9, 11,12			1,2,3, 4,7,9, 10			31	4	4	2
<input checked="" type="checkbox"/>	MAJ	8			7			10			6,8			5	2	2	1
	TS	3,4,6			1,2,4, 6			5,6,7			1,3,4			13	0	2	2
RO <input checked="" type="checkbox"/>	RX		2		6			1			5			4	1	1	0
SRO-I <input checked="" type="checkbox"/>	NOR				3									1	1	1	1
SRO-U <input checked="" type="checkbox"/>	I/C		4,6,7, 9,10, 11		2,4, 8,10			4,6,7, 9,12			1,2,7, 9			19	4	4	2
<input type="checkbox"/>	MAJ		8		7			10			6,8			5	2	2	1
	TS													0	0	2	2
RO <input checked="" type="checkbox"/>	RX													0	1	1	0
SRO-I <input checked="" type="checkbox"/>	NOR			1			6			2			1,5	5	1	1	1
SRO-U <input checked="" type="checkbox"/>	I/C			3,5, 12			1,5,9			3,7,8, 11			3,4, 10	13	4	4	2
<input type="checkbox"/>	MAJ			8			7			10			6,8	5	2	2	1
	TS													0	0	2	2

Instructions:

- Check 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 serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an Instant SRO *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for 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.

Facility: Vogtle 1 and 2			Date of Exam: 4-15-13, 4-29-13, 5-6-13									Operating Test No.: 2013-301					
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 (*)		
		5			6			7									
		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 <input type="checkbox"/>	RX													0	1	1	0
SRO-I <input type="checkbox"/>	NOR	4												1	1	1	1
<input checked="" type="checkbox"/> SRO-U	I/C	1,2,3, 6,9, 10,11 12												8	4	4	2
<input checked="" type="checkbox"/>	MAJ	7,8												2	2	2	1
	TS	1,3,5												3	0	2	2
RO <input checked="" type="checkbox"/>	RX													0	1	1	0
SRO-I <input type="checkbox"/>	NOR		4											1	1	1	1
<input checked="" type="checkbox"/> SRO-U	I/C		1,3, 10,11											4	4	4	2
<input type="checkbox"/>	MAJ		7,8											2	2	2	1
	TS													0	0	2	2
RO <input checked="" type="checkbox"/>	RX													0	1	1	0
SRO-I <input type="checkbox"/>	NOR													0	1	1	1
<input checked="" type="checkbox"/> SRO-U	I/C			2,6, 9,12										4	4	4	2
<input type="checkbox"/>	MAJ			7,8										2	2	2	1
	TS													0	0	2	2

## Instructions:

1. Check 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 serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an Instant SRO *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.
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 1-for-1 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 requirements specified for the applicant's license level in the right-hand columns.

<b>Facility:</b> Vogtle 1 & 2		<b>Date of Examination:</b> 4-15-13, 4-29-13, 5-6-13				<b>Operating Test No.:</b> 2013-301			
Competencies	APPLICANTS								
	RO      X				SRO-I    X SRO-U    X				
	SCENARIO				SCENARIO				
	1	2	3	4	1	2	3	4	
Interpret/Diagnose Events and Conditions	3,4,5,6, 7,8,9, 10,11, 12	1, 2, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	3,4,5,6, 7,8,9, 10,11, 12	1, 2, 4, 5, 6, 7, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	
Comply With and Use Procedures (1)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	
Operate Control Boards (2)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10					
Communicate and Interact	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	
Demonstrate Supervisory Ability (3)					1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	
Comply With and Use Tech. Specs. (3)					3, 4, 6	1, 2, 4, 6	5, 6, 7	1, 3, 4	
<b>Notes:</b> (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.									

**Instructions:**

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

<b>Facility:</b> Vogtle 1 & 2 <b>Date of Examination:</b> 4-15-13, 4-29-13, 5-6-13 <b>Operating Test No.:</b> 2013-301								
Competencies	APPLICANTS							
	RO      X				SRO-I      X SRO-U      X			
	SCENARIO				SCENARIO			
	5	6	7		5	6	7	
Interpret/Diagnose Events and Conditions	1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12				1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12			
Comply With and Use Procedures (1)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12				1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12			
Operate Control Boards (2)	1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12							
Communicate and Interact	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12				1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12			
Demonstrate Supervisory Ability (3)					1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12			
Comply With and Use Tech. Specs. (3)					1, 3, 5			

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

**Instructions:**

Check 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: VOGTLE		Date of Exam: APRIL 2013															
Tier	Group	RO K/A Category Points												SRO-Only Points			
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total	
1. Emergency & Abnormal Plant Evolution	1	3	3	3	N/A			3	3	N/A			3	18	3	3	6
	2	1	1	2				2	2				1	9	2	2	4
	Tier Totals	4	4	5				5	5				4	27	5	5	10
	2. Plant Systems	1	3	2	3	3	2	3	2	3	3	2	2	28	2	3	5
2		1	1	1	1	1	1	0	1	1	1	1	10	1	1	3	
Tier Totals		4	3	4	4	3	4	2	4	4	3	3	38	4	4	8	
3. Generic Knowledge and Abilities Categories		1	2	3	4	10	1	2	3	4	7						
	3	2	2	3		1	2	2	2								

Note:

- Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, the "Tier Totals" in each K/A category shall not be less than two).
- The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by  $\pm 1$  from that specified in the table based on NRC revisions. The final RO exam must total 75 points and the SRO-only exam must total 25 points.
- Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems/evolutions that are not included on the outline should be added. Refer to Section D.1.b of ES-401 for guidance regarding the elimination of inappropriate K/A statements.
- Select topics from as many systems and evolutions as possible; sample every system or evolution in the group before selecting a second topic for any system or evolution.
- Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively.
- Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
- \* The generic (G) K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system. Refer to Section D.1.b of ES-401 for the applicable K/As.
- On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IRs) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G\* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note #1 does not apply). Use duplicate pages for RO and SRO-only exams.
- For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
007EK1.02	Reactor Trip - Stabilization - Recovery / 1	3.4	3.8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shutdown margin
008AG2.4.2	Pressurizer Vapor Space Accident / 3	4.5	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of system set points, interlocks and automatic actions associated with EOP entry conditions.
009EA1.04	Small Break LOCA / 3	3.7	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CVCS
011EK2.02	Large Break LOCA / 3	2.6	2.7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pumps
015AK3.01	RCP Malfunctions / 4	2.5	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Potential damage from high winding and/or bearing temperatures
022AA2.01	Loss of Rx Coolant Makeup / 2	3.2	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Whether charging line leak exists
025AG2.4.21	Loss of RHR System / 4	4.0	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the parameters and logic used to assess the status of safety functions
026AA2.02	Loss of Component Cooling Water / 8	2.9	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The cause of possible CCW loss
029EK3.03	ATWS / 1	3.7	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Opening BIT inlet and outlet valves
038EK1.03	Steam Gen. Tube Rupture / 3	3.9	4.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Natural circulation
054AA1.04	Loss of Main Feedwater / 4	4.4	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HPI, under total feedwater loss conditions



KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
056AK3.02	Loss of Off-site Power / 6	4.4	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions contained in EOP for loss of offsite power
062AA1.02	Loss of Nuclear Svc Water / 4	3.2	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loads on the SWS in the control room
065AG2.4.46	Loss of Instrument Air / 8	4.2	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to verify that the alarms are consistent with the plant conditions.
077AA2.02	Generator Voltage and Electric Grid Disturbances / 6	3.5	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage outside the generator capability curve
WE04EK2.1	LOCA Outside Containment / 3	3.5	3.9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features.
WE05EK2.2	Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	3.9	4.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems and relations between the proper operation of these systems to the operation of the facility.
WE12EK1.1	Steam Line Rupture - Excessive Heat Transfer / 4	3.4	3.8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Components, capacity, and function of emergency systems.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
003AK1.07	Dropped Control Rod / 1	3.1	3.9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effect of dropped rod on insertion limits and SDM
036AA1.04	Fuel Handling Accident / 8	3.1	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fuel handling equipment during an incident
037AA2.08	Steam Generator Tube Leak / 3	2.8	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Failure of Condensate air ejector exhaust monitor
WE02EA2.1	SI Termination / 3	3.3	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.
WE03EK3.2	LOCA Cooledown - Depress. / 4	3.4	3.9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal, abnormal and emergency operating procedures associated with (LOCA Cooledown and Depressurization).
WE06EG2.4.20	Degraded Core Cooling / 4	3.8	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of operational implications of EOP warnings, cautions and notes.
WE13EA1.2	Steam Generator Over-pressure / 4	3.0	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Operating behavior characteristics of the facility.
WE14EK2.1	Loss of CTMT Integrity / 5	3.4	3.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features.
WE16EK3.2	High Containment Radiation / 9	2.9	3.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal, abnormal and emergency operating procedures associated with (High Containment Radiation).

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
003A2.05	Reactor Coolant Pump	2.5	2.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effects of VCT pressure on RCP seal leakoff flows
003K5.02	Reactor Coolant Pump	2.8	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effects of RCP coastdown on RCS parameters
004K5.27	Chemical and Volume Control	2.6	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reason for nitrogen purge of CVCS
005K2.01	Residual Heat Removal	3.0	3.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RHR pumps
006A3.08	Emergency Core Cooling	4.2	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automatic transfer of ECCS flowpaths
007A3.01	Pressurizer Relief/Quench Tank	2.7	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Components which discharge to the PRT
008K4.09	Component Cooling Water	2.7	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The "standby" feature for the CCW pumps
010K4.02	Pressurizer Pressure Control	3.0	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prevention of uncovering PZR heaters
012A1.01	Reactor Protection	2.9	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Trip setpoint adjustment
012K6.02	Reactor Protection	2.9	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Redundant channels
013G2.1.19	Engineered Safety Features Actuation	3.9	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to use plant computer to evaluate system or component status.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
013K3.03	Engineered Safety Features Actuation	4.3	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment
013K6.01	Engineered Safety Features Actuation	2.7	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sensors and detectors
022A1.03	Containment Cooling	3.1	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment humidity
026A4.05	Containment Spray	3.5	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment spray reset switches
039A2.04	Main and Reheat Steam	3.4	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Malfunctioning steam dump
059G2.2.22	Main Feedwater	4.0	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of limiting conditions for operations and safety limits.
061K6.01	Auxiliary/Emergency Feedwater	2.5	2.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Controllers and positioners
062K1.02	AC Electrical Distribution	4.1	4.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ED/G
063K1.03	DC Electrical Distribution	2.9	3.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Battery charger and battery
064A4.05	Emergency Diesel Generator	3.1	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Transfer of ED/G control between manual and automatic
064K1.03	Emergency Diesel Generator	3.6	4.0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Diesel fuel oil supply system

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
07A2.02	Process Radiation Monitoring	2.7	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Detector failure
076K2.04	Service Water	2.5	2.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor building closed cooling water
076K3.05	Service Water	3.0	3.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RHR components, controls, sensors, indicators and alarms, including rad monitors
078K4.02	Instrument Air	3.2	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cross-over to other air systems
103A3.01	Containment	3.9	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment isolation
103K3.01	Containment	3.3	3.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of containment integrity under shutdown conditions

KA	NAME / SAFETY FUNCTION:	IR	RO SRO											TOPIC:	
			K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G		
002K5.10	Reactor Coolant	3.6	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relationship between reactor power and RCS differential temperature
011K2.02	Pressurizer Level Control	3.1	3.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PZR heaters
015K6.01	Nuclear Instrumentation	2.9	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sensors, detectors and indicators
016K3.12	Non-nuclear Instrumentation	3.4	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S/G
034A2.03	Fuel Handling Equipment	3.3	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mispositioned fuel element
035A4.05	Steam Generator	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Level Control to enhance natural circulation
071K4.05	Waste Gas Disposal	2.7	3.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Point of release
072K1.04	Area Radiation Monitoring	3.3	3.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Control room ventilation
079G2.1.23	Station Air	4.3	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to perform specific system and integrated plant procedures during all modes of plant operation.
086A3.03	Fire Protection	2.9	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actuation of fire detectors

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:	
		RO	SRO												
G2.1.15	Conduct of operations	2.7	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of administrative requirements for temporary management directives such as standing orders, night orders, Operations memos, etc.	
G2.1.29	Conduct of operations	4.1	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of how to conduct system lineups, such as valves, breakers, switches, etc.	
G2.1.43	Conduct of operations	4.1	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to use procedures to determine the effects on reactivity of plant changes	
G2.2.42	Equipment Control	3.9	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to recognize system parameters that are entry-level conditions for Technical Specifications	
G2.2.44	Equipment Control	4.2	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions	
G2.3.11	Radiation Control	3.8	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to control radiation releases.	
G2.3.12	Radiation Control	3.2	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiological safety principles pertaining to licensed operator duties	
G2.4.27	Emergency Procedures/Plans	3.4	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of "fire in the plant" procedures.	
G2.4.32	Emergency Procedures/Plans	3.6	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of operator response to loss of all annunciators.	
G2.4.9	Emergency Procedures/Plans	3.8	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of low power / shutdown implications in accident (e.g. LOCA or loss of RHR) mitigation strategies.	

KA	NAME / SAFETY FUNCTION:	IR										SRO	TOPIC:
		2.7	4.1	3.2	3.4	3.3	3.6	3.3	4.0	4.1	2.4		
008AG2.4.30	Pressurizer Vapor Space Accident / 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of events related to system operations/status that must be reported to internal organizations or outside agencies.	
011EA2.07	Large Break LOCA / 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	That equipment necessary for functioning of critical pump water seals is operable	
025AA2.04	Loss of RHR System / 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location and isolability of leaks	
029EG2.4.18	ATWS / 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the specific bases for EOPs.	
056AG2.4.45	Loss of Off-site Power / 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to prioritize and interpret the significance of each annunciator or alarm.	
065AA2.02	Loss of Instrument Air / 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relationship of flow readings to system operation	



KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
005AG2.1.7	Inoperable/Stuck Control Rod / 1	4.4	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation.
078AG2.2.22	High Reactor Coolant Activity / 9	4.0	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of limiting conditions for operations and safety limits.
WE03EA2.1	LOCA Cooledown - Depress. / 4	3.4	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.
WE09EA2.2	Natural Circ. / 4	3.4	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
005G2.1.32	Residual Heat Removal	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to explain and apply all system limits and precautions.
008A2.02	Component Cooling Water	3.2	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High/low surge tank level
039G2.2.25	Main and Reheat Steam	3.2	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.
062G2.2.44	AC Electrical Distribution	4.2	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions
063A2.02	DC Electrical Distribution	2.3	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of ventilation during battery charging

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
015A2.04	Nuclear Instrumentation	3.3	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effects on axial flux density of control rod alignment and sequencing, xenon production and decay, and boron vs. control rod reactivity changes
034A1.02	Fuel Handling Equipment	2.9	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water level in the refueling canal
086G2.2.37	Fire Protection	3.6	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to determine operability and/or availability of safety related equipment

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
G2.1.5	Conduct of operations	2.9	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to locate and use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc.
G2.2.15	Equipment Control	3.9	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to determine the expected plant configuration using design and configuration control documentation
G2.2.20	Equipment Control	2.6	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the process for managing troubleshooting activities.
G2.3.4	Radiation Control	3.2	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiation exposure limits under normal and emergency conditions
G2.3.7	Radiation Control	3.5	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to comply with radiation work permit requirements during normal or abnormal conditions
G2.4.29	Emergency Procedures/Plans	3.1	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the emergency plan.
G2.4.40	Emergency Procedures/Plans	2.7	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the SRO's responsibilities in emergency plan implementation.

Vogtle 05000 2013-301

ES-401

Record of Rejected K/As

Form ES-401-4

Tier / Group	Randomly Selected K/A	Reason for Rejection
1 / 1	065AA2.02 has been replaced with 065AA2.05	Vogtle 1 & 2 has no plant or control room FLOW readings associated with Instrument Air RSBaldwin Friday, January 25, 2013 KA reselected to 065AA2.05
2 / 2	072K1.04 has been replaced with 072K1.04. has been replaced with 072K1.03.	Vogtle 1 & 2 Control Room Ventilation only deals with process Rad Monitors. Current KA is Area Rad Monitor. The Control Room area has an ARM, but it has no cause-effect relationship (alarm only). RSBaldwin, Friday, January 25, 2013 KA reselected 072K1.04. RSBaldwin, Tuesday, February 05, 2013 K072K103
3	G2.4.32 has been replaced with G 2.4.39	Vogtle 1 & 2 has no response guidance to a loss of all annunciators for operators in the Emergency Procedures or Plan. Only thing associated is the Emergency Classification for SROs. RSBaldwin, Friday, January 25, 2013 G 2.4.39

Facility: <b>Vogle 1 &amp; 2</b>		Date of Exam: <b>5/10/13</b>		Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>		
Item Description				Initial		
				a	b*	c*
1. Questions and answers are technically accurate and applicable to the facility.				WJG	BW	JSB
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.				WJG	BW	JSB
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401				WJG	BW	JSB
4. The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL program office).						JSB
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 ___ the licensee certifies that there is no duplication; or ___ other (explain)				WJG	BW	JSB
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	WJG	BW	JSB
	RO 22 (29.3%) /	RO 20 (26.7%) /	RO 33 (44%) /			
	SRO 6 (24%)	SRO 3 (12%)	SRO 16 (64%)			
7. Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory		C/A	WJG	BW	JSB
	RO 35 (46.7%) /		RO 40 (53.3%) /			
	SRO 11 (44%)		SRO 14 (56%)			
8. References/handouts provided do not give away answers or aid in the elimination of distractors.				WJG	BW	JSB
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.				WJG	BW	JSB
10. Question psychometric quality and format meet the guidelines in ES Appendix B.				WJG	BW	JSB
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with the value on the cover sheet.				WJG	BW	JSB
Printed Name / Signature a. Author <u>Kenneth A. Jenkins</u> b. Facility Reviewer (*) <u>GREG WAINWRIGHT</u> c. NRC Chief Examiner (#) <u>RICHARD S. BROWNS</u> d. NRC Regional Supervisor <u>MARK E. FRANKEL</u>				Date 5-3-13 5/3/13 5/6/2013 5/6/13		
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.						

[illegible]

## Received 2-22-2013

Instructions

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

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
3. Check the appropriate box if a psychometric flaw is identified:
  - \$ The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
  - \$ The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
  - \$ The answer choices are a collection of unrelated true/false statements.
  - \$ 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).
4. Check the appropriate box if a job content error is identified:
  - \$ The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
  - \$ The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
  - \$ The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
  - \$ The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
6. 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?
7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws			5. Other	6.	7.  Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units				Back- ward
Generic Comments														
1. The reference information provided for EACH question has to be included with each question. Additionally each question has to be in a note book with labeled dividers. Also need to have an electronic copy of the same material on CDs. We can no longer accept thumb drives.														

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		Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		

- Specific reference material provided has to be highlighted so the examiner can find the appropriate portions that are pertinent to the questions. This is crucial when numerous pages are provided and part of the pertinent references are scattered throughout the material.
- Each question has to be identified as NEW, Modified or Bank and where it was used if it was not NEW.
- KA value for each RO and SRO question needs to be added to the questions.

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		
1	H	3		X									E	002K5.10, Difference between Rx Power and Delta T. New, 1. Standardization of stem. Is it necessary to state in first bullet "based on all indications?" This is not necessary. Remove this or make sure this is the way you want to write it. 2. Teaching in the Stem. The stem provides the applicants that an RTD failing hi will provide the indications. Is this necessary. Can you just state that the following indications are received. This in the stem so it does not have to appear here. 3. KA appears to match. Question is satisfactory. Just need to fix minor comments above. April 1, 2013 Changes done ok as is.
2	H	3											S	003A2.05, New, Higher 1. KA appears to match. 2. What is the purpose of putting the time for the initial conditions? There are no additional times in the question. Most likely this should be deleted. Discuss with licensee. 3. Modify distractor D to read NOT change. 4. Question appears to be ok. April 1, 2013



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		Job-Link	Minutia	#/units	Back-ward	Q=K/A	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	Back-ward	Q=K/A	SRO Only		
														OK	
															003AK1.07, New, Higher
															<ol style="list-style-type: none"> <li>KA appears to match</li> <li>I am not sure that all the Loop Delta T information is necessary to answer this question. Could you remove all that and just ask what happens during a dropped rod? It seems this would be more straight forward. Have licensee explain why this information is necessary to have in the question.</li> <li>The unit in the Loop Delta T is percent, is this correct or should it be degrees F?</li> <li>The answer on the question is identified as distractor C however on the answer explanation the answer is identified as distractor B. Which one is it B or C?</li> <li>Licensee has to look at this question and make sure the answer description matches the answer. It looks like the answers description does not match the same order. SDM then RLL.</li> </ol>
3	H	2-3	X				X								<p>No correct answer and therefore an unsat question.</p> <p>April 1, 2013</p> <ol style="list-style-type: none"> <li>Added the reactor remained at power.</li> <li>Ran on simulator</li> </ol> <p>OK as is.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.  U/E/S	7.  Explanation
			Stem Focus	Cues	T/F		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back-ward	Q=K/A		
4	F	3		X										
003K5.02, Bank, Memory														
1. The information provided will require the applicant to determine what percent Rx power the plant is at. Does this information provided do this? Ask licensee to explain how the applicant it required to determine this information.														
2. In the stem of the second question teaching is noted because you state that "Following the RCP trip and the coast down...." Why is it necessary to state the coastdown? Not sure that it is necessary to say flow lowers, I would imagine that you can just use "Following the RCP trip, the DNBR will _____." Discuss with licensee.														
3. Need to add to distractors A and B the noun name for procedure 12004-C. " "														
4. Have licensee discuss the info on top of the question. What does AML mean?														
Make enhancements New s as discussed above.														
April 1, 2013														
1. Should know they are at 3 percent power.														
2. Removed from stem coastdown.														
3. AML means Allan Lowe.														
4. IN mode 1 but the crew is in MODE 2. This is the way the procedures read.														

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
5	F	2	XX			XX								S	<p>004K5.27, NEW, Memory, Reason for N<sub>2</sub> purge.</p> <ol style="list-style-type: none"> <li>KA does match.</li> <li>Hydrazine is NOT a plausible distractor. It is a liquid and well does not get purged. At least I don't believe it does. At some plants the main turbine generator is purged with CO<sub>2</sub> would this be a plausible distractor? Discuss the plausibility of hydrazine.</li> <li>Two non-plausible distractors makes this question an UNSAT question.</li> <li>Add to the stem the procedure that this question is associated with. Add IAW 13007-1, "VCT Gas Control and RCS Chemical Control."</li> </ol> <p>Evaluated as unsat</p> <p>April 1, 2013</p> <ol style="list-style-type: none"> <li>Some validator's missed and used hydrazine.</li> <li>Change is ok.</li> </ol>
6	H	2-3												S	<p>005K2.01, New, Higher</p> <ol style="list-style-type: none"> <li>KA appears to match.</li> <li>Appears question is ok.</li> </ol> <p>April 1, 2013</p> <ol style="list-style-type: none"> <li></li> </ol>

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
7	H	2-3												E	006A3.08, New, Higher. 1. KA appears to match 2. What is going on with the test valves are in TEST? Do we need to add to the stem WHY these valves are in this position? Seems to me it does. Discuss with licensee 3. Sequence of events does not make sense in that during a large break LOCA RWST switch indications are as stated, this does not read well. Please word smith to get a better picture on what is happening. 4. Nothing on the reference material was highlighted. When material is presented in this manner the evaluator has to look at everything presented rather than those key items. Highlighting these items makes the review easier. Without the highlights it takes longer to review the question. Make changes to question, April 1, 2013
														S	1. Lights indicate that the swap over can occur. 2. OK licensee explained how this works. This makes sense now. Nothing has to be changed. 3. Change the 28% on the test to 26% to ensure that the licensee applicants do not think the stroke time would not interfere with the time the signal comes in.

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
8	F	2-3				X								E	<p>007A3.01, New, Memory, Auto ops of PRTS, monitor.</p> <ol style="list-style-type: none"> <li>KA appears to match.</li> <li>The question asks the maximum pressure in the PRT. It does not clarify before or after the PRT rupture disk failure. I believe it necessary to clarify this so the applicant does not think the max pressure is 0 psig which would be after the rupture disk failure. Discuss with licensee.</li> <li>Is there a RHR discharge relief valve? There was no indication that one exists, however, I believe there is one. Documentation did not identify if there was one and did not identify what the pressure for relief is. Discuss using one of those numbers if available. Distractor plausibility comes into play if there is not one or if the relief valve pressure is lots different.</li> </ol> <p>Discuss with licensee.</p> <p>April 1, 2013</p> <ol style="list-style-type: none"> <li>There is a suction relief valve. Will not need the valve numbers.</li> <li>Ok as is.</li> <li>Suction is 450 psig and discharge is 600 psig.</li> </ol> <p>OK as was changed.</p>
														S	

# Written Examination Review Worksheet

[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	Back-ward	Q=KA			SRO Only
9	F	2-3												E/S	007EK1.02, Memory  1. Question 3 also deals with SDM. This could be used to help answer this question. Need to review with licensee to verify no overlap of knowledge. 2. Do not believe anyone will miss this question. Realizing this is an important topic but all applicants know that a SDM is required after a Rx trip and Emergency boration is required only if there is more than one rod stuck in the core. <b>ONE SRO missed this question.</b> 3. The requirement for E boration is on Step 7 of 190001-C, "Reactor Trip Response," as pointed out in the reference material and is a step that every RO and SRO applicant would come into play with on almost every scenario. Memory requirements.  Verify no overlap with licensee <b>April 1, 2013</b> 1. No overlap has been identified. 2. Two or more stuck rods requires e boration. 3. Standard TS.  OK as is.
														S	
														U	008AG2.4.02, Memory, Bank  1. KA appears to match. 2. Reference material provided not marked up. There are no reference set points on here to verify answer. Logic documents are almost too small to read. 3. Was this run on the Simulator to ensure the answer is correct? 4. It would be a hard task to determine if distractors A and B are correct in that, the answer is based on different parameters and is a variable set point. Because of this I do not believe these
10	F	2-3													XX









[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	Back-ward	Q=K/A		
														Change the stem to: "Assuming no operator actions, which one of the following (WOOTF) describes the current pressurizer heater status." Or something like above.  April 1, 2013
													S	1. JA wants NO capitalized in stem. "Assume NO operator ..." 2. Removed automatically from distractor. 3. Also removed turned, also made it to read easier. 4. Changed dropped to lowers.  OK as changed.
													E	011EK2.02. Bank Higher (VGT 2009)  1. KA appears to match 2. Prints were provided however, nothing was highlighted and therefore hard to decipher. 3. The lineup initially is not well defined. Add to second bullet using the "B" RHR pump. 4. Is it necessary to add to the stem the information concerning the procedure currently in progress? Add to stem they are performing steps of ES-1.3, "Transfer to Cold Leg Recirculation."  April 1, 2013
14	H	3											S	1. Delete bullet that states, all other components are functioning properly.  OK as changed.

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
15	H	2-3												S	<p>011K2.02, Higher, Modified from HL 15 Audit.</p> <ol style="list-style-type: none"> <li>KA appears to match.</li> <li>Question meets modified requirements.</li> </ol> <p>Question is satisfactory.</p> <p><b>April 1, 2013</b></p> <ol style="list-style-type: none"> <li>Removed all other equipment as previous question.</li> </ol> <p>Ok as changed.</p>
16	F	2-3												S	<p>012A1.01, Memory, Modified. (WC09)</p> <ol style="list-style-type: none"> <li>KA appears to match</li> <li>In the stem is it possible to remove the teaching and just state "an inadvertent dilution occurred." Discuss with licensee.</li> </ol> <p>No further changes necessary.</p> <p>Question will be sat if suggestion is made.</p> <p><b>April 1, 2013</b></p> <ol style="list-style-type: none"> <li>Changed as requested removed the teaching.</li> <li>What about rods, are they in automatic. Or rods in manual?</li> <li>Added Rods in MANUAL.</li> </ol> <p>Ok as modified.</p>
17	H	3												S	<p>012K6.02, Bank, Higher.</p> <ol style="list-style-type: none"> <li>KA appears to match</li> <li>Is it necessary to state that all other equipment started correctly? Discuss with licensee.</li> </ol> <p>Question is Satisfactory.</p> <p><b>April 1, 2013</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only	
														<ol style="list-style-type: none"> <li><b>No it is not necessary</b></li> <li>Capitalize both, BOTH, in distractors B and D.</li> <li>Removed Low steam line pressure. Teaching, so it does not affect other questions.</li> </ol> <p>OK as changed. Made the steam clearer</p>
													E/U	<ol style="list-style-type: none"> <li>KA appears to match.</li> <li>Initial conditions have the word NOT and it is in caps once and small letters the second time. Is there a reason it was written differently? Use all caps each time but be consistent with all questions.</li> <li>What does the word "available" mean in the context of the question? Will the applicants understand what you are trying to convey? Discuss. Does this mean NOT lighted?</li> <li><b>Distractors B and D, second part</b>, do not appear to be plausible it does not seem reasonable that the applicants would not know where these indications are NOT available on the computer. Identify a case where the lights are ONLY on the main control board. Look at this during prep week to see how the crew actually does the evaluation.</li> <li>Information provided does not help in understanding the answer to the question asked. Having annunciator windows from the</li> </ol>
18	F	2				XX								

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
														<b>S</b>	<p>computer printout and picture of the annunciator cube on the control board does not help explain anything.</p> <p>6. Discuss with licensee what the expectations are of the RO and SRO in this area.</p> <p>Get a better understanding of what is being asked and what is required knowledge.</p> <p><b>April 1, 2013</b></p> <ol style="list-style-type: none"> <li>Struck the story telling. Got rid of this information.</li> <li>FWI, CVI, do not appear.</li> <li>Does RESET need to be in caps? YES.</li> </ol>
														<b>U</b>	<p>013K3.03, New, memory,</p> <ol style="list-style-type: none"> <li>KA appears to</li> <li>In this question you state LOCA in other questions you state large break LOCA. Should this be standardized so to not cue the applicants into a specific size and therefore a canned response? Discuss</li> <li><b>Distractions C and D are not plausible.</b></li> <li>The 2<sup>nd</sup> part of the question is states "higher containment pressure," however, the basis in the question speaks to temperature. Discuss with licensee.</li> <li>This is a TS basis question, ok with licensee. Make sure to ask the Ops representative. Will we have an Ops rep during the exam prep week? Who is the Ops rep?</li> </ol> <p>Need to review and rework or replace.</p> <p><b>April 1, 2013</b></p> <ol style="list-style-type: none"> <li>Slow speed to protect the motors.</li> <li>STILL needs work. Need to revisit.</li> </ol>

## Written Examination Review Worksheet

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	

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	
													S	<p>April 3, 2013</p> <p>1. See Number 19 question. Very in-depth rewording.</p> <p>2. NEW question is very good.,</p> <p>GOOD Question.</p>
													S	<p>013K6.01, Modified, Mem.</p> <p>1. KA appears to match.</p> <p>2. Does No operator action taken mean that the bistables are not bypassed?</p> <p>3. Question satisfactory.</p> <p>April 1, 2013</p> <p>1. Yes it is NO action at all.</p> <p>2. Changed to remove HI -1 and HI-3 and inserted SI and Containment Spray.</p> <p>OK is better.</p>
20	F	2-3												<p>015AK3.01, Memory, Bank, Farley, 2007</p> <p>1. Need to add the procedure being used to start this third RCP like the initial question uses.</p> <p>2. Why are the second parts all different? Can you not use two answers and swap or would that make an additional answer?</p> <p>3. Failure mechanism, not sure how the material references this and what the lesson material states. This does not seem to be a failure mechanism. Discuss with licensee to understand.</p> <p>4. This seems like it could be a series of True and False questions. Could we use anti-reverse rotation device pawls are engaged.</p>
21	F	2-3				XX							E/U	

## Written Examination Review Worksheet

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
														S	<p>5. Recommend to change to a 2 by 2 in both top and bottom. But not necessary.</p> <p>April 1, 2013</p> <p>1. Changes, ok with version 2. 2. Ok as changed, see the exam for total changes.</p>
22	F	2-3												S	<p>015K6.01, Memory, Bank –LORQ</p> <p>1. KA appears to match 2. Question is ok 3. No changes necessary</p> <p>April 1, 2013</p> <p>1. Ok as is,</p>
														U	<p>016K3.12, memory, New,</p> <p>1. KA appears to match. 2. Distractors A, B and C are not plausible in that FEED water is digital and every single instrument will be selected out by the system and will NOT cause a change in SG parameters. 3. Fix distractors.</p> <p>Question evaluated as unsat.</p> <p>April 1, 2013</p>
23	F					XX								S	<p>1. New instruments are NOT in digital feed water. This was just as bad, this is just as bad 2. Swapped two from original to 2 of the new and the new question is much better. OK as changed.</p>





## Written Examination Review Worksheet

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	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A			SRO Only
25	H	2-3									XXX			U	022AA2.01, Higher, Mod-HL-16,  1. KA DOES NOT appear to match. THE KA asks the applicant to determine if a charging line leak exists. The question asks the applicant to determine if a charging line leak exists and the answer is it does not exist. Therefore the KA does not match. While the licensee provided parts of the P&IDs a simple one line diagram should have also be provided so easier understanding of the entire system to facilitate a faster review. 3. Discuss with other examiners to determine if this does not match.  April 1, 2013 1. New question now matches KA. 2. View changes on exam, D was changed to have a charging line break down stream of the Regenerative heat exchanger. 3. Subset a and D. 4. Added "the" on B and C. 5. OK as changed.
26	H	3				XX								U	025AG2.4.21, New, Higher, Wednesday, March 13, 2013 1. KA appears to match 2. Distractor A is not plausible. While the action of stopping the drain down is plausible, the non action of waiting for level to stabilize does not make sense because nothing was done to cause level to stabilize. You could stop the pump and see if CSFST turns green. Add to stop cavitation if you leave it in D.



## Written Examination Review Worksheet

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			Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only	
														<p>The way this question is written it seems that there are numerous issues with why each distractor is not plausible. Discuss with BC and then see if licensee can take action to change some of them to be more plausible. At this time question is considered unsatisfactory.</p> <p><b>April 1, 2013</b></p> <ol style="list-style-type: none"> <li>NEW question.</li> <li>KA matches better.</li> <li>RO knowledge, YES by Thad Thompson.</li> <li>Changed significantly from initial subinitial.</li> <li>One Tc WR to the left is NOT all to the write.</li> <li>Figure A. NOT TO BE GIVEN.</li> <li>Added at 100%</li> </ol> <p>OK as change.</p> <p>026A4.05, New, memory,</p>
27	F	3				XX							U	<p>3. Distractor D, the answer, is the only distractor that states ... to stop cavitation. Is this information to stop cavitation necessary?</p> <p>4. Distractor C does not seem plausible because there is ONLY 1 foot from the 188 value listed in the distractor. Can the value in the stem be increased to 200 or something like that so the action to reduce drain down has time to take place? Can there be a value to which the drain down is reduced like 50%? So the action taken would have an effect.</p>

[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	Backward	Q=K/A			SRO Only
														S	Discuss with licensee, too many issues need to determine if valid, evaluate as two correct answers therefore Unsat.  <b>April 1, 2013</b>  1. Procedure should be 1.5 hours in recirc mode. 2. Incorrectly evaluated as UNSAT, this was not done correctly. IS an E. or an S.
28	H	3												S	026AA2.02, Bank, Higher  1. KA appears to match. 2. Question appears to be satisfactory.  <b>April 1, 2013</b>  1. No change.
29	F	3												S	029EK3.03, Modified Bank, Memory,  1. KA appears to match 2. Appears question is satisfactory. 3. Bank question was not provided therefore could not determine if this question met the modified criteria. Question is considered satisfactory.  <b>April 1, 2013</b>  1. No changes necessary.

## Written Examination Review Worksheet

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only	
30	F	2-3				XX					XX			<p>034A2.03, New, Memory,</p> <p>1. KA appears to NOT match.</p> <p>2. While the question asks if the RO can authorize stopping fuel movement, the question asks if a fuel assembly is put in the wrong place does the RO have the authority to suspend fuel movement. The question is mixing up apples and oranges. The RO can suspend fuel movement. However, in this case a fuel assembly placed in the wrong place and can the RO stop fuel movement. The action does not fix by procedure this mistake.</p> <p>The question should ask will the RO allow the Fuel Handling Supervisor to put the assembly in the incorrect place and the answer is no. However, what does the RO do to remedy this? But the question asks if the RO has the authority to stop fuel movement. The answer is yes he does but it has no fix to placing a fuel assembly in the wrong place.</p> <p>Question does not fix the problem.</p> <p>Evaluated this question as Unsatisfactory because the action does not mitigate the problem.</p> <p>April 1, 2013</p> <p>1. I may have been too restrictive on the correction of this issue. Maybe this was only the mitigative and this makes the ok.</p> <p>2. The question was rewritten</p> <p>REVISIT</p> <p>April 3, 2013</p> <p>1.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6.  U/E/S	7.  Explanation
			Stem Focus	Cues	T/F			Job- Link	Minutia	#/ units	Back- ward	Q = K/A	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 Link	Job-Minutia	#/units	Back-ward	Q= KA	SRO Only		
31	F	2-3	XX										E	035A4.05, New, Memory, 1. KA appears to barely match. The SG level control is the KA. This is only one of the parameters identified in the question. 2. Place the "r" inside. 3. Question provides the parameter and why parameter is used. This is teaching and should be removed. Just put the parameter and not the reason. E Maintain PRZR pressure greater than 1950 psig Maintain PRZR level greater than or equal to 25 % Maintain SGNR approx. 65% Maintain steam flow for minimum loop delta T 4. Change statement to state which one of the following combinations. Add combinations to stem. Make changes will be sat. April 1, 2013 S 1. Changed as requested. 2. Changed ONE to one. OK as changed,

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F		Job-Link	Minutia	#/ units	Backward	Q= K/A	SRO Only		
												U/E/S		Explanation

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other Q = KA SRO Only	6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units				Back-ward	
32	F	2				XX						?		U	<p>036AA1.04, New, Memory</p> <ol style="list-style-type: none"><li>KA appears to ??</li><li>The KA concerns itself with Fuel Handling Incidents with fuel handling equipment during an incident. Is bowing or twisting of a fuel assembly considered a fuel handling incident? What are fuel handling incidents? Discuss with licensee.</li><li>The first part of the question states with Fuel Handling Supervisor permission, rotating the Refueling Machine Mast, is or is not allowed ... It seems the way this is written, why would anyone select is not allowed, if you have Fuel Handling Supervisors permission? This does not seem reasonable. Get permission but then you cannot do it? Discuss with licensee.</li><li>Then the second part of the statement is... if necessary the Refueling Machine hoist can or cannot be operated. Does not make sense that ....if necessary the refueling machine hoist cannot be manually operated. It only makes sense if you insert can, cannot makes no sense.</li></ol> <p>Question needs to be redone, only the positive statements fit in the blanks.</p>
														S	<p>April 1, 2013</p> <ol style="list-style-type: none"><li>NOT a fuel handling incident. Changed the question.</li><li>Changes made are sufficient.</li><li>Question appears to be ok.</li></ol> <p>JA does not believe that this is a valid, he remembers where the question came from.</p>

[illegible]

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6.	7.	
			Stern Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward			O=K/A
													E	037AA2.08, Modified- Farley, 2010 NRC. Higher  Explanation
													S	
													S	
33	H	2-3		XX										April 1, 2013
														1. 724 does not go into power until 15%. Have to know that. If it would read there. Not sure. 2. Seen on IPC and read purple. 3. Added valid. Ok as changed.
														038EK1.03, Bank Farley, 2004, Higher
34	H	3											E	1. KA appears to match but is provided in the stem. 2. Why not use the exact question as used by Farley. This way the KA matches better than it does this one. Ask licensee to explain why the original question does not work or was changed to make it better or worse. 3. Recommend to go back to Farley question.
													S	April 1, 2013
														1. Licensee took suggestion to go back to the Farley question.



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 K/A	Q= 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	Back- ward K/A	Q= SRO Only		
														<p>Change to a bank question. OK as changed, no further changes necessary.</p>
35	H	2-3											S	<p>039A2.04, Modified Callaway, Higher</p> <ol style="list-style-type: none"> <li>KA appears to match</li> <li>Callaway question not provided.</li> <li>OK as presented.</li> </ol> <p>April 1, 2013</p> <ol style="list-style-type: none"> <li>Ok as is</li> </ol>
36	H	3											S	<p>054AA1.04, MOD-HL17, NRC, Higher,</p> <ol style="list-style-type: none"> <li>KA appears to match</li> <li>Question is modified</li> <li>Question is satisfactory</li> </ol> <p>April 1, 2013</p> <ol style="list-style-type: none"> <li>OK as is, no change necessary</li> </ol>
													XX	<p>056AK3.02, New, Memory</p> <ol style="list-style-type: none"> <li>KA appears to match</li> <li>I do not believe that distractor C is reasonable and plausible.</li> <li>Find another distractor for this. Replace this Distractor.</li> </ol> <p>April 2, 2013</p> <ol style="list-style-type: none"> <li>Licensee changed C</li> </ol>
37	F	2-3				XX							S	<p>OK as changed</p>

[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	Back-ward			Q= KA
38	H	3											E	059G2.2.22, New, Higher  1. KA appears to match 2. Is it expected that the RO applicants know Operability calls for this system? Discuss with licensee and ensure that OPS REP expects this to be done. 3. Was this validated by any ROs? If so what was the results? 4. Otherwise appears to be ok  April 2, 2013  1. No not expected to know operability B distractor to LOCAL on the Main Control Board (MCB). This is a control circuit and not protection. OK as changed. OK as changed.  061K6.01, New, Higher.  1. KA appears to match. 2. It appears that the second part of the question will answer the first part because the statement tells you that the valve has to be reset. 3. The inserted wording for the second part does not read correctly for the answer. Should there be the word "then." Ask licensee to ensure the wording is correct for latching and opening the T & T valve.  Discuss to ensure this is correct.
													S	
39	H	3											E	April 2, 2013  1. Change is ok.  Question is ok
													S	



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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		

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	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		
40	H	3												S	062AA1.102, Bank LOIT, Higher 1. KA appears to match. 2. Question appears to be ok  April 2, 2013 No comments.
														E	062K1.02, Bank-LOIT, Higher 1. KA appears to match 2. Is it necessary to identify what the 186A (Generator Differential) and the 186B (Phase Overcurrent) lookouts are? I do not believe this is necessary. Remove this information, it is teaching. 3. Otherwise the question is ok  April 2, 2013
41	H	3												S	1. Not necessary to have name. 2. Determined that the change was NOT warranted and left it the same way. OK as is. No change was required.
42	H	3												E	063K1.03, New, Higher 1. KA appears to match. 2. Have licensee explain how this works during in office meeting. 3. Second part of distractors A and B, capitalize ONLY as done other places. Minor change. Appears to be ok

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		Job-Link	Minutia	#/units	Back-ward	Q=K/A		

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		
													S	<p>April 2, 2013</p> <p>1. Did request. OK as changed.</p>
43	H	3		X									E	<p>064A4.05 1, Emergency Diesel Generator (EDG) System,</p> <p>1. Appears question matches KA.</p> <p>2. Does not identify what the question is, new, bank, modified.</p> <p>3. This needs to be added someplace in the information provided. Be consistent with numbering of components. Is this the way DG1B is identified?</p> <p>4. Why is it necessary to STATE in the third bullet that the LOCAL-REMOTE switch is in LOCAL? I believe that this is common knowledge for the RO and SRO applicants and does not have to be provided. Remove this bullet. This is curing the applicants.</p> <p>5. Discuss with facility concerning this issue.</p> <p>6. Changed the word "lists" to "identifies" to make it clearer since there is NO list in distractor A.</p> <p>Question does not identify the Level of Knowledge or difficulty. I will attempt to my ability to address these items on the table.</p> <p>The licensee on each question should identify both these</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws			5. Other	6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F			Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A		
														<p>qualifiers.</p> <p>Question is considered editorial and needs editorial enhancements as discussed above.</p> <p><b>Wednesday, March 13, 2013</b></p> <p>New, Higher,</p> <p>1. Number 3 above, removed LOCAL as requested.</p> <p>Additional editorial comment, does the ONLY in distractors A C and D have to be capitalized as done other places. Be consistent.</p> <p><b>April 2, 2013</b></p> <p>Ok as change</p>
														<p>064K1.03, Bank-LOIT, Memory,</p> <p>1. KA appears to match.</p> <p>2. What does the actual answer mean? It appears that Either Train on Either Unit FOST. Does that mean that Train A FOST can supply Train A FOST? Is it true that the AUX Boiler can also supply fuel to anyone of the DGs FOST?</p> <p>3. Did any validators get this incorrect?</p> <p>4. Why would anyone believe that only the aux boiler ? This system seems to be very capable of many line ups.</p> <p>5. Can unit 1 and unit 2 cross connect as well as Unit 1 train A to Unit 1 train B?</p> <p>Have licensee show examiners how this system works. Make sure there is no confusion as to what the answer means.</p> <p><b>April 2, 2013</b></p> <p>1. Each can be cross connected. By procedure.</p> <p>2. Change and to OR.</p>
44	M	3												S

## Form ES-401-9

[illegible]

[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	Backward	Q= KA			SRO Only	
															Wednesday, March 13, 2013  1. Ok as is.	
46	H	2-3												E	071K4.05, Mod-LOIT Bank, Higher  1. KA appears to match. 2. Why is it necessary to provide in the stem that A-RV-0014 closes on a high radiation signal? The applicants should know this from system knowledge. 3. On validation, did anyone get this incorrect? 4. Have licensee explain what is being asked? And what this it trying to test?  April 2, 2013  1. The system works this way. 2. 8 of 11 got this correct. 3. Removed the word Automatically in the stem.  OK as changed	
														S		

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6.  U/E/S	7.  Explanation
			Stem Focus	Cues	T/F		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
47	H	2-3										X		U	<p>072K1.03. Modified HL-15R Audit. Higher, KA appears to <b>NOT</b> match, fuel building isolation. High alarm <b>only provides the audible and visual indications</b> no isolation. Second part does not isolate it only either starts filtration or does not start filtration. In this case ALERT only does not cause starting of the filtration. NO isolation of fuel building. Does not match KA</p> <p>2. Original question was not provided, therefore, could not determine if question meets the modified criteria.</p> <p>3. Question can be answered without knowing how this system works. If the first alarm is a High alarm, then this would cause the system to provide the function to occur. Since the second filtration unit does not receive a start signal only an alert, then you can assume that this does not start the system only approaching the start signal.</p> <p>Need to change question to match KA. What causes isolation of fuel building?</p> <p>April 2, 2013</p> <p>1. Added a high alarm and made the question better.</p> <p>2. Re-arranged this question and swapped both parts.</p> <p>Question is ok as changed. See the test question for changes.</p>
48	F	2-3												S	<p>073A2.02. Bank HL-16, Memory, KA appears to match.</p> <p>2. Question appears to be ok.</p> <p>April 2, 2013</p>

[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	Back-ward	Q=K/A	SRO Only			
																1. No changes
																076K2.04, New, Higher, 1. KA appears to match 2. For distractors C and D capitalize ONLY. AS in other questions Question appears to be ok. April 2, 2013
49	H	3													S	1. OK accepted
																076K3.05, Modified – LOIT Bank, Higher
50	H	2-3													S	1. KA appears to match, 2. Should "no" be underlined or something to that effect? So an applicant does not pass over it. 3. Original question was not provided, therefore could not determine if this meets the modified requirements. 4. Remove correctly from stem. Question is ok as is with minor comments above. April 2, 2013
																1. NO in caps. 2. Ok as changed.
																077AA2.02, Bank – HL-17, Higher
51	H	2-3													S	1. KA appears to match 2. ON the graph provided, I would like to have the wording on the Y axis of Leading and Lagging removed. The applicant should know what they are without this information. 3. If lead lag are left in on graph then distractor C is not plausible. The analysis states if the applicants don't notice, well they will notice if they are there.



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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
															<p>With minor change to handout question is satisfactory.</p> <p>April 2, 2013</p> <ol style="list-style-type: none"> <li>One applicant missed last exam.</li> <li>Licensee states that this was a direct repeat from HL-17 exam.</li> <li>Since the licensee states that the examiners wrote this distractor. WE will accept this question at face value.</li> </ol> <p>OK AS IS</p>
															<p>Procedure 18007-C page 7 of 52 indicates it is revision 12/27/2013, rev date. Rev Number. 9.3. Greg will look up why? Should be 9.1.</p> <p>078K4.02, New, Memory,</p> <ol style="list-style-type: none"> <li>Add to the stem the procedure that this NOTE comes from.</li> <li>KA appears to match.</li> </ol> <p>Minor change, evaluated as sat</p> <p>April 2, 2013</p>
52	M	2												S	<ol style="list-style-type: none"> <li>Added procedure note. OK as changed.</li> </ol>
53	H	3												??	<p>079G1.2.23, New, Higher</p> <ol style="list-style-type: none"> <li>KA appears to match</li> <li>In this situation how many RCPs would be running and the NCP would be available and or running? Ask if this should be in the initial conditions?</li> </ol>



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			Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only	
														<p>3. What procedure would the plant be in prior to the entry into the loss of instrument air?</p> <p>Appears to be ok however I need to understand what is available in terms of ARV(s), RCPs, NCP?</p> <p>April 2, 2013</p> <p>1. Removed the RCP from the stem.</p> <p>2. OK as changed.</p> <p>OK as is.</p> <p>Changes were accepted see the exam to review changes.</p> <p>086A3.03, Bank – Vogtle 2005/HL, Higher.</p>
54	H	3											E	<p>1. KA appears to</p> <p>2. The way the system is designed and all systems on a loss of power there would be something that would allow a fire to be detected. I do not believe that a system would have been designed without this in mind. With this in mind someone could identify that the system will detect a fire without power. Therefore it is unreasonable to believe that the other two distractors B and C are creditable. What changes could be</p>

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

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>made to make the opposite answer creditable?</p> <p>3. In distractor A, what are the clapper valves and why would the applicants believe they would have to trip them manually?</p> <p>4. Licensee to explain so I can determine if this is plausible.</p> <p>There are 4 different answers for part 2 of the question. Is there a way to use only 2 of them?</p> <p>5. Distractor B, is it common knowledge for operators concerning this level that is discussed?</p> <p>is it possible to have the fire detection system NOT detect the fire but have the fire pump start? Is this reasonable? I am not sure why there is a distinction between the two. Is the question speaking to just the Alarm in part 1?</p> <p>April 2, 2013</p> <p>1. New question was provided.</p> <p>2. New question is considered sat.</p> <p>3. Ok for test.</p> <p>4. New question is more memory level.</p>
55	H	3											S	<p>103A3.01, Mod – Bank Farley, Memory.</p> <p>1. KA appears to match</p> <p>2. Question appears to be ok.</p> <p>April 2, 2013</p>
														Ok as is.
56	F	2-3											S	<p>103K3.01, New, Memory</p> <p>1. KA appears to match.</p> <p>2. Question appears to be ok.</p>

**Form ES-401-9**

[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	Back-ward	Q=K/A		
														April 2, 2013
														Ok as is 1.
														G2.1.15, New, Memory. 1. KA appears to match. 2. Question is trivial. Level of difficulty is a 1-2. April 2, 2013 Ok as is.
57	F	1-2											S	G2.1.29, Modified Bank LOT, Memory, 1. KA appears to match, 2. What is the procedure to do the same item however it is in a high radiation area? 3. This question has a LOD of 1. See if we can change this to suggestion above it there is a different answer. I think we can do better than this. We can only have so many lower level questions and I would like to make this more challenging. April 2, 2013 1. NEEDS more WORK. April 3, 2013
													E	
58	F	1											S	April 3, 2013 1. Changed to add noun name for a safety related valve rather than just saying a Safety Related valve. This requires the RO/SRO to identify that the valve is a Safety Related valve. 2. Good change Ok AS changed. See exam for all changes made.

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		Job-Link	Minutia	#/units	Back-ward	Q=K/A	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	Back-ward	Q=K/A	SRO Only		
59	H	2-3												S	G2.1.43, New, Higher. 1. KA appears to match. 2. Question appears to be ok.  April 2, 2013
															Ok as is.
60	F	2												S	G2.2.42, Modified – LOIT, Memory. 1. KA appears to match 2. Is the operators expected to know from memory each Tech Spec parameter and if it is in spec or not? Ensure the OPS representative is asked if he expected this to be remembered. Appears to be ok if Operations Supervisor agrees this is expected. April 2, 2013
															1. OPS rep stated that this is required memory. THIS IS OK 2. Word smithed the distractors. See examination for changes.
61	H	2-3												S	G2.2.44, Bank – HL -15, Higher 1. KA appears to be match 2. Remove the word "correct" from the stem. 3. In stem emphasize NO prior to operator action. Otherwise question appears to be ok. April 2, 2013
															1. Changed stem. See question 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			Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back-ward	Q=K/A		
62	H	2											E/S	G 2.3.11, Bank LOIT, Higher.  1. KA appears to match 2. On page 4 of 90 in the reference, 13216-1, 2.1.5 states and RX-0018 does not show a trouble condition. What does that actually mean? Is the monitor as described in the question in a troubled condition? Licensee to explain what this means. 3. Remove the word "correct" and then reword the question. IN the stem WMT #9 is being released, however, none of the distractors as well as the question does not reference the #9, does it have to? I think it does. 4. What is meant by the ODCM requirements? Please put these in the analysis so we can capture what this means. The ODCM is not defined nor is the procedure number identified. This should also be added. 5. The procedure by which the WMT is being released should also be in the stem. To ensure that the question is totally correct. This should reference 13216-1, Liquid Waste Release. 6. Minor changes, question is considered sat.  April 2, 2013
													S	
														1. Spell out the ODCM 2. Ok as change.  Question appears to match.

1. Spell out the ODCM
2. Ok as change.

Question appears to match.

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		Job-Link	Minutia	#/units	Back-ward	Q=K/A	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	Back-ward	Q=K/A	SRO Only		
63	F	2-3												E/S	<p>G 2.3.12, New, Memory</p> <ol style="list-style-type: none"> <li>KA appears to match.</li> <li>The question has the KEY Bypass Switch, the procedure calls this the Bypass Interlock Key for the Key Bypass Switch. Is the terminology used on the question the correct way to state this? I believe it should be a Bypass Interlock Key and then need to change the stem to state "must be used to override the Key Bypass Switch. IS this the case? Licensee to explain.</li> <li>ONLY needs caps in both distractors B and D.</li> </ol> <p>Otherwise appears to be ok.</p> <p>April 2, 2013</p> <ol style="list-style-type: none"> <li>Added correct terminology.</li> <li>Ok as changed.</li> </ol>
64	H	3												E	<p>G 2.409, Bank – LOIT, Higher</p> <ol style="list-style-type: none"> <li>KA appears to be</li> <li>Do not see why distractor A is a plausible distractor, the pressure in this situation is way below the reseating pressure of the relief valve. Not sure this is really plausible. Discuss with licensee.</li> <li>For distractor D, where the subcooling is less than 38 deg F however this situation is not adverse and the subcooling is 24 deg F. If this was 24 deg F for a non-adverse situation, then this would be or could be correct? Is this what the question analysis is stating? It seems that the answer can be changed to be correct if we talk about subcooling and use 24.</li> </ol> <p>Replace distractor A with something that is more plausible. There is a leak someplace however containment pressure and rad levels are not going up. Is this a correct statement or is this fictitious?</p>

[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	Back-ward	Q=K/A			SRO Only
															April 2, 2013  1. Distractor A is not plausible, have not figured out what to do for this. 2. Changed distractor A to Manually SI handswitches.
65	F	1-2												S	G 2.4.27, Bank NL-17, Memory  1. KA appears to match\ 2. Is the reason because Train B isolated from Class 1 E circuits in the Control Room? Ask license. 3. Question appears to be ok.  April 2, 2013  1. OK as is, yes it is.  Appears to be ok.
															G 2.4.39, MOD – MNS 2010 HL, memory,  1. KA appears to match 2. Original question not provided in package. 3. Question is memory level. 4. Very low level of knowledge.  April 2, 2013
66	F	1-2												S	April 2, 2013  1. OK as is. 2. Added REPEATED in caps.







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 K/A	Q= 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	Back- ward	Q= K/A	SRO Only		
														S	<p>1. NO change, licensee states that removing this would cause distractor C to also be correct because the SI signal is the same signal and you cannot identify the difference between the Sis.</p> <p>2. Added to distractors B and C. see exam for changes to these distractors.</p> <p>OK as changed.</p>
69	H	2-3												S	<p>ME04EK2.1, Bank HL-17, Higher.</p> <p>1. KA appears to match</p> <p>2. Question used last exam.</p>
70	H				2-3	XX								U	<p>ME05EK2.2, New, Higher.</p> <p>1. KA appears to match.</p> <p>2. The procedure states "try to establish to at least one SG." this is different than "Feed ONLY ONE SG as stated in distractors A and B. Need to ask OPS and Licensee management if the way this is written it means just that, "Feed ONLY ONE SG?"</p> <p>3. The initial conditions provide indication of a HOT DRY SG. With CETCs at 552° F and wide range at less than 10% in ALL SGs NO one would choose either of distractors. And I therefore content that neither distractor C or D is plausible. WE are showing two extremes in this question.</p> <p>4. Feeding ALL S/Gs does not appear to be creditable because of the plant conditions. The question could be developed to change the SGs levels and provide specific S/Gs levels above and below 10% or have the containment in an adverse condition as to elicit those numbers.</p>

[illegible][illegible]

[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	Back-ward	Q=K/A	SRO Only			
																4. This was rewritten by Amanda, she provided guidance to help with ensuring that distractors C and D plausible however incorrect. This question is sat as changed.  See exam to see how much was changed.
																ME12EK1.1, Modified HL-16 NRC, Higher.  1. KA appears to match 2. Why is WR SG level not provided? 3. Modification has same initial conditions, two answers were changed. T 4. The answer is the same for question # 70, it is a different situation however the amount of flow is 30 gpm. Can an applicant figure out the answer by looking at both these questions. 5. Believe that these two questions can be used to get answer. Both the answers are almost the same.  Need to replace this or #70  1. 70 was changed significantly. Changed 70 to have not to exceed to 100 gpm. For A and B. 2. SEE both questions to see how this is now OK.  Question # 70  1. Licensee states that the second part of the answer is not correct. Reason for 30 gpm. Reduce dryout and minimize thermal stresses.
72	H	2-3													U	

[illegible]

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	Job-Link	Minutia	#/units	Back-ward	Q=K/A			SRO Only
															<div>7.</div> <div>Explanation</div> <div>2. The suggestions did not work have to go back to the original question. Look at the draft.</div> <div>3. Now new wording of the stem.</div> <div>4. See the final exam for complete wording changes. Changes made basically went back to the original submittal and took the 30 gpm out of the distracters.</div> <div>5. Does not now conflict with 70.</div> <div>April 3, 2013</div>
															<div>OK as changed.</div> <div>ME13EA1.2, Bank LOIT, Memory.</div> <div>1. KA appears to match</div> <div>2. Distractor B does not seem plausible. I would not think to inject because of the level in the # 3 SG. It seems that 85% is getting to the high trip setpoint and would be an issue of carry over.</div> <div>3. Distractor C is reasonable</div> <div>4. Is it necessary to identify that there is a SG over-pressurization going on in the question stem? Why not say an action to mitigate the situation going on above? Will this work?</div> <div>April 3, 2013</div>
73	F	3				X									<div>S</div> <div>1. Changed stem to add LOSP.</div> <div>2. Changed SG 3 Level to 78 vice 85.</div> <div>See Exam to see what was changed. Minimal changes.</div>

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A			SRO Only
74	F	2-3												E/S	ME14EK2.1, Bank – LOT, Memory. 1. KA appears to match. 2. IN this question you ask WOOTF completes the following statements. Where statement is plural. This is inconsistent with all other questions. Need to determine which way will be done. Using statement or statements? It makes no difference to me. 3. ONLY needs to be capitalized in A and B 4. BOTH should also be capitalized in distractors C and D. 5. "signal" in the stem should be signal(s). C and D are plural. Otherwise appears to be ok. Fix minor inconsistencies as well as above.
														S	April 3, 2013 1. Changes above were made as requested. 2. Appears to be ok.
														S	ME16EK3.2, New, Memory, 1. KA appears to match 2. Question appears to be ok. April 3, 2013 1. No issues.
SRO ONLY Questions															
76	H	2-3												S	005AG2.107, Bank, Higher, 1. KA appears to be ok. 2. When you ask a question concerning bases, is the question asked by asking about the TS and not listing the bases when it is being asked? Ask licensee. Should we just say in accordance with TS vice TS Bases?



[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	Back- ward		
													3. Question appears to be ok.  <b>April 3, 2013</b> 1. Ok as is.
													<b>005G2.1.32, New, Memory</b> 1. KA appears to match 2. First part of question is RO knowledge. IS 25 less than 50? If it is then we could have two answers that are correct. Does this need to be changed to the MAXIMUM allowable temperature? Discuss with licensee. 3. Second part of question appears to be ok with SRO knowledge. 4. Should the word "bases" be "basis" for the second part of question? Ask licensee.  <b>April 3, 2013</b> 1. Changed as requested in Number 2 above. 2. Changed above.
													<b>008A2.02, New, Higher</b> 1. KA appears to match. 2. In the stem under initial conditions identifies a leak and proceeds to inform the applicant that the system works as designed. Is it necessary to say it this way? 3. The fill in the blank in part 1 can be changed, remove "to be" prior to the blank. So the answer would read SS will declare ... Train 'A' Operable or inoperable. 4. Second part does not read correctly with the incorrect answer.  Otherwise ok <b>April 3, 2013</b>
78	H	3										S	
77	F	2-3	XX			XX						E	
												S	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws			5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only	
79	F	2-3											S	<p>008AG2.4.30, New, Memory</p> <ol style="list-style-type: none"> <li>KA appears to match</li> <li>In stem put last quotes after the question mark. Like this?"</li> <li>Reword distractor A to "RCS Confirmed presence of loose parts." This is so it is not a copy of the procedure.</li> <li>Question appears to be ok minor wording change.</li> </ol>
80	H					XX							E	<p>011EA2.07, New, Higher</p> <ol style="list-style-type: none"> <li>In the conditions pressure is 12 psig, is it slowly rising as in the CETs? Licensee to address.</li> <li>Distractors B and D are NOT plausible because of the 71° F. Just because this number appears in this procedure, first, are they expected to know what this number is, then why would they have to remember a procedure step loop back number of some sorts? Ask licensee to find another number that the applicants would or could make a mistake with. Since this is one issue that encompasses two distractors will not call it an Unsat question.</li> <li>In second question the noun name is not correct. Need to add an "E1" in the noun name for the procedure, 19010-C. Fix this.</li> <li>In the current conditions, add to the procedure noun name the letter designation of "FR-C.1".</li> <li>Is it expected that the SRO know from memory that for this situation that adverse numbers for the SIG levels are 32%? Ask Operations Rep to make sure they agree this is a memory item.</li> </ol> <p>Find another reasonable number for B and D. Have licensee explain how the applicant is to come up with there is NO seal cooling. Use prints during prep week.</p>





[illegible][illegible]



[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	Back-ward	Q=K/A			SRO Only
85	F	2													1. KA appears to match. 2. Distractors A and B second part does not make sense for the Main Steam Safety Valves. It does not stand to reason that an SRO would not understand the difference between the MSSVs and the ARVs and not be able to determine that the MSSVs that the operators have no control of are, and are not used for cooldown. This is basic knowledge that an RO knows. 3. Distractors B and D first part are also NOT plausible. The operator knows that the springs determine the size of the seat area determine the set point. Additionally, the first question in the stem asks for the REASON this is NOT a reason it is a statement of design. 4. Three of the 4 distractors are not plausible. Only the answer is plausible.  The question needs to be completely redesigned. Discuss with BC and licensee why.
															1. With the water level as described in the question, will there be 10 feet of water as described in the handout material provided? I am not sure that this is true and therefore may have two answers. Discuss with licensee. 2. Otherwise changes made appear to have fixed the initial concerns. 039G2.2.25 1 Main and Reheat Steam System (M/RSS) Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits: (CFR 41.5 / 41.7 / 43.2)
															4. Does the core off load with transfer gate valve give credibility to the level decrease? 5. Don't believe that second parts of B and D are plausible. Adequate volume.... I would rather see something that pertains to the radiation levels in the Building. <b>Tuesday, March 12, 2013</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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only	
														<p><b>Tuesday, March 12, 2013</b></p> <p>1. Question was changed to allow for usage of TS material. What exactly is going to be provided to applicants?</p> <p>2. This new change requires the SRO applicant to look up the value of the relief setpoint and determine if the number falls between +2 and - 3 of the value provided in TS. While the question description describes that this is SRO only, I do not believe that this is really that. The page is provided to as a reference, the values are looked up to see what they should be and then multiply the percentage and determine the max or min allowed value. What of this is SRO knowledge?</p> <p>3. Second part does not make sense for A and B. Why would the SROs be fooled to primary values when we are speaking to secondary values. Discuss with licensee to understand why they think this.</p> <p>More needs to be done.</p>
86	H	2-3	XX										E	<p>056AG2.4.45 Loss of Offsite Power. Ability to prioritize and interpret the significance of each annunciator or alarm: (CFR: 41.10 / 43.5 / 45.3 / 45.12)</p> <p>1. What references will be provided? Ask licensee to identify.</p> <p>2. I was unable to find the reference used to determine the answer. I need to have a copy of the E plan to see how this is being shown to the applicant. This may or may not be ok.</p> <p>3. The correct answer states that it is difficult because the time being greater than 15 minutes is key. Well I am not sure that this is that difficult to determine, especially when it is listed as 20 minutes ago. It would be better if a true timeline was used and</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only	
														<p>the individual at least has to figure out from the times given how much time has gone by. It is confusing the listing of all the alarms is under the title Current conditions and Alarms. After the last alarm there is a statement ALL occurred 20 minutes ago. FIX: change to have the alarms come in a reasonable timeline so the applicants can determine how long ago the event started.</p> <p>4. KA appears to match.</p> <p>Enhancements that need to be addressed will make the question ok.</p> <p><b>Tuesday, March 12, 2013</b></p> <p>1. Changes made are ok.</p> <p>2. Would still like to see what reference is being provided.</p> <p>Question is sat</p>
87	H	2-3											S	<p>062G2.2.44, New, Higher</p> <p>1. In the stem put "7" inside the parenthesis.</p> <p>2. Should in second part of distractors A and C the ONLY be better identified, for example capitalize, bold or something so it is not missed.</p> <p>3. Otherwise question appears to be SAT.</p> <p>Make minor changes.</p>
88	H	1-2				XX						XX	E	<p>063A2.02, Modified, Higher</p> <p>1. Question does not appear to me to be SRO only. The question</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
															<p>covers basic knowledge for low flow in the battery room. Specifically there could be two correct answers. Distracter C could be also correct. The second part is correct and is identified in the ARP. It actually speaks to temperature limit of the room. Not sure if there is a TS battery room temperature. However, what is the TS battery room temp limit, is there one? There is no reference that speaks to the hydrogen concentration in the room being an issue. It makes sense but not addressed by the information provided by licensee. Discuss with licensee KA appears to match.</p> <p>Very low level C/A question.</p> <p>Discuss with licensee.</p>
89	H	2											XX	U	<p>065AA2.05, New, Higher,</p> <ol style="list-style-type: none"> <li>KA appears to match</li> <li>Disagree with question being SRO level.</li> <li>Sources of water to the air compressors is not SRO knowledge.</li> <li>Does not really meet the SRO level. Discuss with licensee. Second part could be an answer if air cannot be restored.</li> <li>Discuss with licensee.</li> </ol> <p>Need to revisit this question. Will discuss with another examiner to see what they think.</p>



Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other	6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F		Job- Link	Minutia	#/ units	Back- ward	Q= SRO K/A 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	Back-ward		
													Currently evaluate this as a U.
													076AG2.2.22, New, Higher.
90	H	2										E/U	<div>1. The answer as written is not correct in that, it is a small fraction of the 10CFR100 Limits during a SGTR accident and that is limited to the first 2 hours of the accident. Licensee has to look at this and see what if anything has to be done. Could this be a cause for saying this does not have answer?</div> <div>2. First part of the question is a direct read from the graph.</div> <div>3. Question is SRO only however not very challenging. It is basically a memory level question with graph usage.</div> <div>4. Second part of distractors B and D does not make sense. Discuss with examiners and BC why. Statement activity does not interfere with detection of leakage in containment does not make sense.. Ask BC.</div> <div>Evaluated as an U. Discuss with other examiner before sending to licensee.</div>

[illegible][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		Job- Link	Minutia #/ units	Back- ward K/A	Q= 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	Back- ward K/A	Q= SRO Only			
														<p>it is memory. There is no analysis only remembering if a closed pressurizer blocked safety valve being closed causes the PRZR safety valve to be closed block valve. This seems to be trivial and not a C/A question. Have licensee discuss this.</p>

**Generic Comments concerning the SRO only questions.**

1. Up to this point in the exam most of the SRO questions are not very challenging. They are not complex concerning combinations of knowledge's that have been developed for questioning.													
													G2.1.05 New, Memory.
													1. Stem asks to complete the statement or is it statements?
													2. KA appears to match.
													3. Distractor B and D use 8 hours for second part. Analysis states this was an old TS. When was this TS changed? During this class? If not during this class it is NOT a plausible distractor. Discuss with licensee when the modification occurred. B and D second time have to be changed. The applicant other than SRO upgrades were not exposed to that time for reset. Needs a better time than 8.
													4. How many people on validation got this question wrong? Anyone?
													5. Does not the ROs have to know what their reset time is? Seems they do. Discuss with examiners and licensees.
92	F	1-2										XX	U
												XX	

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		Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only		
93	H	2												E	<p>G2.2.15, Bank, Higher</p> <ol style="list-style-type: none"> <li>KA appears to match.</li> <li>There is an extra underscore after the word MINIMUM and before the word post. "MINIMUM_post"</li> <li>Put the "?" in the parentheses.</li> <li>This is the first question the terminology NOT OPERABLE is used. Other areas where this is done the terminology is inoperable. See question 91. Need to use the same convention all the time. Pick one or the other. I believe it can be done either way.</li> <li>Use the same fill in the blank as done in almost all other questions prior to this.</li> <li>Question is more of a memory, what skills are being used to analyze, calculate or evaluate the initial conditions to answer the question.</li> <li>Remove the valve number and put in stem.</li> </ol> <p>Discuss with NRC examiners and management. This seems to be the level at which the SROs are being evaluated on this exam.</p>
94	H	2												S	<p>G2.2.20, NEW, Higher</p> <ol style="list-style-type: none"> <li>KA appears to match.</li> <li>Here is another example of a listed Higher question that is really a memory level type question. We need to ensure that we do not have lots of this type of questions.</li> <li>It is simple one dimensional question that does not require much if any other skills other than memory.</li> <li>Need to ensure we have enough C/A questions for the entire exam.</li> <li>While this question is sat I would rather replace this question. Need to have another Chief Examiner look at this and the BC to look at also</li> </ol>

[illegible][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			Job- Link	Minutia	#/ units	Back- ward	Q= K/A	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	Back- ward	Q= K/A	SRO Only	
97	F	2											S	G.2.4.29, Mod HL-17 NRC, memory. 1. KA appears to match. 2. Appears to be ok 3. Again it is a memory question. The question is satisfactory. Over all testing of C/A questions is minimal.
98	F	2-3											S	2.4.40, Bank, Memory 1. KA appears to match. 2. Put the "2" in the parenthesis. 3. Most of the other two part questions were developed with a fill in the blank configuration. This question is different? It is not necessary to change unless you want to make this question like the others. 4. Memory level question. Need to ensure we have enough C/A questions because of the changes or discussions I put forward changing C/A questions to memory level questions. 5. Question appears to be ok.
99	H	3											S	WE03EA2.1, Bank, Higher: 1. KA appears to match 2. Question appears to be ok
100	H	3											S	WE09EA2.2, Bank, HL-17, Higher 1. KA appears to match 2. This question is much more complex than those above. Need to discuss with BC this and determine if those described above are complex enough for the level expected on the SRO examination. Question is sat.

[illegible][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			Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		

Facility: Vogtle 1 & 2		Date of Exam: 5/10/13		Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>	
Item Description		Initials			
		a	b	c	
1.	Clean answer sheets copied before grading	<i>MD</i>	N/A	<i>RSB</i>	
2.	Answer key changes and question deletions justified and documented	<i>N/A</i>	N/A	<i>RSB</i>	
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<i>MD</i>	N/A	<i>RSB</i>	
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	<i>MD</i>	N/A	<i>RSB</i>	
5.	All other failing examinations checked to ensure that grades are justified	<i>MD</i>	N/A	<i>RSB</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>MD</i>	N/A	<i>RSB</i>	
Printed Name/Signature		Date			
a. Grader	<u>Michael G. Donithan</u> <i>Michael G. Donithan</i>	<u>6/10/13</u>			
b. Facility Reviewer(*)	<u>N/A</u>				
c. NRC Chief Examiner (*)	<u>Richard S. Baldwin</u> <i>Richard S. Baldwin</i>	<u>6/10/2013</u>			
d. NRC Supervisor (*)	<u>Mark E. Franke</u> <i>Mark E. Franke</i>	<u>6/13/13</u>			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					