

ES 201-1

Facility: <u>Vogtle Units 1 and 2</u>		Date of Examination: <u>5/12 to 5/16 and 5/29, 2014</u>
Examinations Developed by: <div style="display: inline-block; vertical-align: middle; margin-left: 20px;"> <div style="border: 1px solid black; border-radius: 50%; padding: 2px 5px; display: inline-block;">Facility</div> <div style="border: 1px solid black; border-radius: 50%; padding: 2px 5px; display: inline-block; margin-left: 10px;">Written</div> <div style="border: 1px solid black; border-radius: 50%; padding: 2px 5px; display: inline-block; margin-left: 10px;">Operating Test</div> </div>		NRC 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)	<i>JAT</i>
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	<i>JAT</i>
-120	3. Facility contact briefed on security and other requirements (C.2.c)	<i>JAT</i>
-120	4. Corporate notification letter sent (C.2.d)	<i>JAT</i>
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	<i>JAT</i>
{-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)	<i>JAT</i>
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	<i>JAT</i>
{-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)	<i>JAT</i>
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	<i>JAT</i>
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	<i>JAT</i>
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	<i>JAT</i>
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	<i>JAT</i>
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	<i>JAT</i>
-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)	<i>JAT</i>
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	<i>JAT</i>
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	<i>JAT</i>

* 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.

ES 201-2

Facility: Vogtle 1 & 2		Date of Examination: 05/12/2014		Operating Test Number: 2014-301	
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.	mg	fw	gao	
	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.	mg	AW	gao	
	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.	mg	AW	gao	
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.	mg	AW	gao	
	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	mg	AW	gao	
	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.	mg	AW	gao	
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.	mg	AW	gao	
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	mg	AW	gao	
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	mg	AW	gao	
	d. Check for duplication and overlap among exam sections.	mg	AW	gao	
	e. Check the entire exam for balance of coverage.	mg	AW	gao	
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	mg	AW	gao	
a. Author <u>Ken Jenkins</u> b. Facility Reviewer (*) <u>Al Sweet</u> c. NRC Chief Examiner (#) <u>J. Amanda Toth</u> d. NRC Supervisor <u>Eugene Cruthrie</u>		Printed Name/Signature <u>Ken Jenkins</u> <u>Al Sweet</u> <u>J. Amanda Toth</u> <u>Eugene Cruthrie</u>		Date 04/25/14 04/25/14 4/30/2014 5/6/14	
Note:		# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines			

WRITTEN SAMPLE PLAN ONLY

ES-201

Examination Outline Quality Checklist

Form ES-201-2

Facility: VOGTLE		Date of Examination: MAY 2014		
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.	A		gas
	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.	A		gas
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	A		gas
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	A		gas
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.			N/A
	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.			
	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.			
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.			N/A
	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			
	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.			
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.	A		gas
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	A		gas
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	A		gas
	d. Check for duplication and overlap among exam sections.	A		gas
	e. Check the entire exam for balance of coverage.	A		gas
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	A		gas
a. Author <u>Phillip Capchart</u> Printed Name/Signature b. Facility Reviewer (*) <u>N/A</u> c. NRC Chief Examiner (#) <u>J. AMANDA TOTH</u> d. NRC Supervisor <u>MARK FRANKIE</u>		Date <u>8/9/13</u> <u>8/9/13</u> <u>8/12/13</u>		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines				

Phil Capchart
A - Per email 8/9/13.
gas

























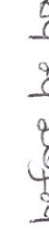





ES 201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of May 12-30, 2014, 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 May 12-30, 2014. 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
Charles Teppapau	Instructor		12/30/13		5/5/14	
Willie Branton	NPO		12/30/13		6/19/14	①
William Satterfield	SSS		01/06/14		6/2/14	
Chevis PATISELL	SSS		1-6-14		6/2/14	
Henry m... ..	NPO		1-6-14		6/2-14	
Andrew Rose	NPO		1-8-14		6/2/14	
Keith ONEAL	NPO		1/16/14		6/2/14	
Rodney Walker	NPO		1-16-14		6-2-14	
John ACKER	OTM		2/3/14		6/2/14	②
Rick Haws	TECH. MGR.		6/2/14		6/2/14	
Michael PEARCE	IT Specialist		5/26/14		6/19/14	
Mike Brown	OUTAGE OPS MANAGER		7/7/14		5-30-14	
Keith Duck	SSS / Instructor		4/24/14			①
James J... ..	SS		4/14/14			
Willie Branton	NPO		6/19/14			

6/19/14

NOTES:

① emailed copy of signature on 201-3 is included (post-exam)

② individual was terminated by facility before he had knowledge of any exam content, and was not available to sign off of agreement.

ES-201-3

Examination Security Agreement

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the weeks May 12-30, 2014 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 May 12-30, 2014. 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. Al Sweat	Lead Instructor / Exam Lead	<i>Al Sweat</i>	5/16/13	<i>Al Sweat</i>	6-2-14	
2. Corry Craine	Ops Train Inst / Exam Dev	<i>Corry Craine</i>	8/16/13	<i>Al Sweat</i>	5/29/14	
3. Curtis Talley	Ops Train Inst / Exam Dev	<i>Curtis Talley</i>	8/16/13	<i>Al Sweat</i>	6/2/14	
4. Ken Jenkins	Ops Train Inst / Exam Dev	<i>Ken Jenkins</i>	8/16/13	<i>Al Sweat</i>	5/30/14	
5. Ernest m. Thornton Jr.	Ops Train Inst / Requal Exam Dev	<i>Ernest m. Thornton Jr.</i>	8/19/13	<i>Ernest m. Thornton Jr.</i>	5/29/14	①
6. Gary Okmsted	Fleet Exam Manager	<i>Gary Okmsted</i>	8/4/13	①		
7. MARK HAYDEN	OPERATIONS TRAINING LOC	<i>Mark Hayden</i>	9/27/13	<i>Mark Hayden</i>	5/30/14	
8. KEITH LEWIS	OPS TRAINING COORDINATOR	<i>Keith Lewis</i>	12/10/13	<i>Keith Lewis</i>	5/30/14	
9. Jeff Mercer	Simulator Coordination	<i>Jeff Mercer</i>	10/19/13	<i>Jeff Mercer</i>	6/2/14	
10. Derryl Fuller	Nuc Specialist	<i>Derryl Fuller</i>	12/13/13	<i>Derryl Fuller</i>	6/2/14	
11. Sidney C Allen	SSS	<i>Sidney C Allen</i>	12/19/13	<i>Sidney C Allen</i>	6/2/14	
12. James C Johnson	SC Inst C Tech Simshop	<i>James C Johnson</i>	12/18/13	<i>James C Johnson</i>	6/2/14	
13. Nakeya Crawford	SE Engineer	<i>Nakeya Crawford</i>	12/18/13	<i>Nakeya Crawford</i>	6/2/14	
14. Scott Landmann	Nuc Plant Ops Instructor	<i>Scott Landmann</i>	12/18/13	<i>Scott Landmann</i>	6/2/14	
15. Ronald Kelly	Nuc Plant Ops Instructor	<i>Ronald Kelly</i>	12-20-13	<i>Ronald Kelly</i>	5-29-14	

NOTES: ① emailed copy of signature on 201-3 is included (postexam)

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of May 12-14 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 May 12-14. 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>Andrew Jenkins</u>	<u>SS</u>	<u>[Signature]</u>	<u>3/27/14</u>	<u>[Signature]</u>	<u>6/3/14</u>	
*2. <u>Chris Loona</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>5/12/14</u>	<u>[Signature]</u>	<u>5/12/14</u>	(1)
*3. <u>MIGUEL HERNANDEZ</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>5/12/14</u>	<u>[Signature]</u>	<u>5/12/14</u>	(1)
*4. <u>STANLEY HEAVIS</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>5/12/14</u>	<u>[Signature]</u>	<u>5/12/14</u>	(1)
*5. <u>EDD HODGINS</u>	<u>OPS SS</u>	<u>[Signature]</u>	<u>5/12/14</u>	<u>[Signature]</u>	<u>5/12/14</u>	(1)
*6. <u>JAMES LYSTONER</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>5/12/14</u>	<u>[Signature]</u>	<u>5/12/14</u>	(1)
*7. <u>CHIL WHITE</u>	<u>OPS INSTR.</u>	<u>[Signature]</u>	<u>5/13/14</u>	<u>[Signature]</u>	<u>5/12/14</u>	(1)
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*Operating Test Only (Note 1)

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 5-12-14 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 5-12-14. 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
Trevor O. McQuinn	Operations Instructor		3/27/14		5/30/14	
Matthew Vineyard	SSS		5/27/14		6/2/14	
JEREMY TAYLOR	System Operator		5/14/14		5/15/14	
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NOTES:

Added due to having CBO during in-plant JPL's. Signed off when in-plant JPL's completed.

Examination Security Agreement

ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the weeks of May 11-27, 2014 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 May 12, 14. 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. Jeff Todd	Operations Director	<i>Jeff Todd</i>	<u>2/7/14</u>	<i>Jeff Todd</i>	<u>6/27/14</u>	
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1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of May 11 - 27 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 May 11 - 27. 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. Kerry D. Landis	President, Landis Consulting, LLC	<i>Kerry D. Landis</i>	01/25/14	<i>Kerry D. Landis</i>	5/30/2014
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NOTES:					

(emailed)

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of May 11 - 27 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 _____. 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>Ron Aizelb</u>	<u>Exam Review</u>	<u>[Signature]</u>	<u>12/4/14</u>	<u>[Signature]</u>	<u>5/3/14</u>
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NOTES:

(e-mailed)

Examination Security Agreement

ES-201

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of May 12-30, ²⁰¹⁴ 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 May 12-30. 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. Charles Tepper	Instructor	<i>[Signature]</i>	12/30/13	<i>[Signature]</i>	5/15/14
2. Willie Branton	NPO	<i>[Signature]</i>	12/30/13	<i>[Signature]</i>	5/15/14
3. William Satterfield	SSS	<i>[Signature]</i>	01/06/14	<i>[Signature]</i>	06/04/14
4. Chris Pitts	SSS	<i>[Signature]</i>	1-6-14	<i>[Signature]</i>	6/2/14
5. Henry Miller	NPO	<i>[Signature]</i>	1-6-14	<i>[Signature]</i>	6/2/14
6. Andrew Rose	NPO	<i>[Signature]</i>	1-8-14	<i>[Signature]</i>	6/2/14
7. Keith O'Neil	NPO	<i>[Signature]</i>	1/16/14	<i>[Signature]</i>	6/2/14
8. Rodney Walker	NPO	<i>[Signature]</i>	1-16-14	<i>[Signature]</i>	6/2/14
9. James Acosta	DTM	<i>[Signature]</i>	2/3/14	<i>[Signature]</i>	6/2/14
10. Rick Harris	TECH. MGR.	<i>[Signature]</i>	2/3/14	<i>[Signature]</i>	6/2/14
11. Michael Peppers	IT Specialist	<i>[Signature]</i>	2/3/14	<i>[Signature]</i>	6/2/14
12. Michael Brown	OUTAGE OPS MANAGER	<i>[Signature]</i>	2/3/14	<i>[Signature]</i>	6/2/14
13. Keith Duck	SSS / Instructor	<i>[Signature]</i>	2/3/14	<i>[Signature]</i>	6/2/14
14. James Turner	SS	<i>[Signature]</i>	2/3/14	<i>[Signature]</i>	6/2/14
15.					

NOTES:

(emailed copy)

ES-201-3

Examination Security Agreement

1. Pre-Examination

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2. Post-Examination

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. Al Sweat	Lead Instructor / Exam Lead	<i>Al Sweat</i>	5/6/13			
2. Cory Craine	Ops Train Inst / Exam Dev	<i>J. Craine</i>	8/16/13	<i>J. Craine</i>	5/29/14	
3. Curtis Talley	Ops Train Inst / Exam Dev	<i>Curtis Talley</i>	8/16/13			
4. Ken Jenkins	Ops Train Inst / Exam Dev	<i>Ken Jenkins</i>	7/16/13	<i>Ken Jenkins</i>	5/30/14	
5. Ernest M. Thornton	Ops Train Inst / Regional Exam Dev	<i>Ernest M. Thornton</i>	8/19/13	<i>Ernest M. Thornton</i>	5/29/14	
6. Gary Okonsted	Fleet Exam Manager	<i>Gary Okonsted</i>	8/14/13	<i>Dan Okonsted</i>	5/30/14	
7. MARK HAYDEN	OPERATIONS TRAINING COCT	<i>Mark Hayden</i>	9/27/13	<i>Mark Hayden</i>	5/30/14	
8. Keith Lewis	Ops Train Inst / Coordinator	<i>Keith Lewis</i>	12/10/13	<i>Keith Lewis</i>	5/30/14	
9. Jeff Mercer	Simulator Coordinator	<i>Jeff Mercer</i>	10/13/13			
10. Deryl Fuller	Nuc Specialist	<i>Deryl Fuller</i>	12/13/13			
11. Sidney L Allen	SSS	<i>Sidney L Allen</i>	12/10/13			
12. James C. Johnson	SC Inst C Tech Supervisor	<i>James C. Johnson</i>	12/18/13			
13. Nakheya Crawford	SR Engineer	<i>Nakheya Crawford</i>	12/18/13			
14. Scott Landmann	Nuc Plant Ops Instructor	<i>Scott Landmann</i>	12/18/13			
15. Ronald Kelly	Nuc Plant Ops Instructor	<i>Ronald Kelly</i>	12/20/13	<i>Ronald Kelly</i>	5/29/14	

NOTES:

(EAV CNDU)

1. Pre-Examination

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. Charles Tappan	Instructor	<i>[Signature]</i>	12/30/13	<i>[Signature]</i>	5/15/14
2. Willie Branton	NPO	<i>[Signature]</i>	12/30/13		
3. William Sutherland	SSS	<i>[Signature]</i>	01/04/14		
4. CHRIS MITCHELL	SSS	<i>[Signature]</i>	1-6-14	<i>[Signature]</i>	6/2/14
5. Henry Miller	NPO	<i>[Signature]</i>	1-6-14	<i>[Signature]</i>	6/2/14
6. Andrew Rose	NPO	<i>[Signature]</i>	1-8-14	<i>[Signature]</i>	6/2/14
7. Keith ONCE	NPO	<i>[Signature]</i>	1/16/14	<i>[Signature]</i>	6/2/14
8. Rodney Wallace	NPO	<i>[Signature]</i>	1-16-14	<i>[Signature]</i>	6/2/14
9. James Acquist	DTM	<i>[Signature]</i>	2/5/14	<i>[Signature]</i>	6/2/14
10. Rick Hous	TEN4 M4P	<i>[Signature]</i>	2/5/14	<i>[Signature]</i>	
11. MICHAEL PEARCE	IT Specialist	<i>[Signature]</i>	3/17/14	<i>[Signature]</i>	
12. MICK BROWN	OUTAGE OPS MANAGER	<i>[Signature]</i>	4/1/14	<i>[Signature]</i>	5-30-14
13. Keith Quack	SSS / Instructor	<i>[Signature]</i>	4/1/14	<i>[Signature]</i>	
14. James Horn	SS	<i>[Signature]</i>	4/1/14	<i>[Signature]</i>	6/2/14
15.					

NOTES:

(emailed copy)

ES 301-1 RO

Facility: <u>Vogtle 1 & 2</u>		Date of Examination: <u>05/12/2014</u>
Examination Level: RO <input checked="" type="checkbox"/> SRO		Operating Test Number: <u>2014-301</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations (a)	R, M	<p>a. V-NRC-JP-19263-HL19: Determine Maximum Allowable Venting Time for Venting Voids in the Reactor Vessel</p> <p>Description: Unit 2 tripped due to a LOCA. RCS pressure is recovering and the crew is responding to voids in the reactor vessel. Using provided data, the candidate will be required to calculate the maximum allowable venting time using 19263-C, Attachment 3, "Instructions for Determining Venting Time."</p> <p>G2.1.25 RO 3.9</p>
Conduct of Operations (b)	R, D	<p>b. V-NRC-JP-14005-HL19: Determine Shutdown Margin With One Stuck Rod</p> <p>Description: During control rod operability testing on Unit 1, one control rod fails to move when demanded. The candidate will be required to calculate the available shutdown margin for the given conditions using 14005-1, "Shutdown Margin and Keff Calculations."</p> <p>G2.1.43 RO 4.1</p>
Equipment Control (c)	R, M	<p>c. V-NRC-JP-14915-HL19: Perform Quadrant Power Tilt Ratio Surveillance for Inoperable QPTR Monitor Alarm</p> <p>Description: The QPTR Monitor Alarm is inoperable. With data provided, the candidate will complete 14915-1, "Special Conditions Surveillance Logs," Data Sheet 7, to calculate Quadrant Power Tilt Ratio for the inoperable QPTR Monitor Alarm.</p> <p>G2.2.12 RO 3.7</p>
Radiation Control (d)	N/A	N/A

Emergency Procedures/Plan (e)	S, D	<p>e. V-NRC-JP-NMP-EP-111-HL19: Perform ERO Recall and ENN Notification</p> <p>Description: Candidate will perform an ERO recall and an ENN roll call, and will confirm receipt of the Emergency Notification by State and Local Authorities by reading the first five lines of the Emergency Notification Form over the ENN and requesting acknowledgement. Task is Time Critical.</p> <p>G2.4.43 RO 3.2</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 & Criteria:</p> <p>(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected)</p>		

ES 301-1 SRO

Facility: <u>Vogtle 1 & 2</u>		Date of Examination: <u>05/12/2014</u>
Examination Level: RO SRO <input checked="" type="checkbox"/> SROU <input checked="" type="checkbox"/>		Operating Test Number: <u>2014-301</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations (a)	R, M	<p>a. V-NRC-JP-19263-HL19: Determine Maximum Allowable Venting Time for Venting Voids in the Reactor Vessel</p> <p>Description: Unit 2 tripped due to a LOCA. RCS pressure is recovering and the crew is responding to voids in the reactor vessel. Using provided data, the candidate will be required to calculate the maximum allowable venting time using 19263-C, Attachment 3, "Instructions for Determining Venting Time."</p> <p>Same as RO Admin JPM a.</p> <p>G2.1.25 SRO 4.2</p>
Conduct of Operations (b)	R, D	<p>b. V-NRC-JP-14005-HL19: Determine Shutdown Margin With One Stuck Rod</p> <p>Description: During control rod operability testing on Unit 1, one control rod fails to move when demanded. The candidate will be required to calculate the available shutdown margin for the given conditions using 14005-1, "Shutdown Margin and Keff Calculations."</p> <p>Same as RO Admin JPM b.</p> <p>G2.1.43 SRO 4.3</p>
Equipment Control (c)	R, M	<p>c. V-NRC-JP-14915-HL19: Perform and Evaluate Quadrant Power Tilt Ratio Surveillance for Inoperable QPTR Monitor Alarm</p> <p>Description: The QPTR Monitor Alarm is inoperable. With data provided, the candidate will complete 14915-1, "Special Conditions Surveillance Logs," Data Sheet 7, to calculate Quadrant Power Tilt Ratio for an inoperable QPTR Monitor Alarm, evaluate the data, and determine appropriate Tech Spec actions.</p> <p>G2.2.12 SRO 4.1</p>

Radiation Control (d)	R, M	<p>d. V-NRC-JP-91301-HL19: Assess Radiological Conditions in an Emergency and Determine if a Task Can be Performed</p> <p>Description: During a General Emergency, a Systems Operator is to be dispatched to operate equipment. The candidate must determine the appropriate Emergency Exposure Limit based on the given conditions and assigned task, and then assess the radiological data provided to determine if the task can be completed without exceeding the applicable Emergency Exposure Limit of 91301-C.</p> <p>G2.3.14 SRO 3.8</p>
Emergency Procedures/Plan (e)	R, M	<p>e. V-NRC-JP-NMP-EP-110-HL19: Classify an Emergency Event and Complete the Emergency Notification Form</p> <p>Description: Based on the given conditions, the candidate will use NMP-EP-110 to determine the highest emergency classification level. WebEOC will not be available, which will require the candidate to manually complete the Emergency Notification Form from NMP-EP-111-F10.</p> <p>G2.4.41 SRO 4.6</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 & Criteria:</p> <p>(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected)</p>		

ES 301-2 RO/SRO-I/SRO-U

Facility: <u>Vogtle 1 & 2</u>		Date of Examination: <u>05/12/2014</u>
Exam Level: RO <input checked="" type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input checked="" type="checkbox"/>		Operating Test Number: <u>2014-301</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. V-NRC-JP-13009-HL19: Perform a Manual Makeup to the VCT</p> <p>Description: The unit is at 100% power with the VCT level at 32%. Automatic makeup to the VCT is not available due to a level control circuit malfunction. The candidate is directed to perform a manual makeup to raise VCT level to 50% using 13009-1. During the manual makeup, the BA FLOW DEVIATION alarm will be received, which will require the candidate to manually stop the makeup to limit the effects of a dilution event.</p> <p>(RO / SRO-I / SRO-U)</p> <p>004A4.12 RO 3.8 SRO 3.3</p>	A, M, S	1
<p>b. V-NRC-JP-19014-HL19: Transfer ECCS Pumps to Hot Leg Recirculation</p> <p>Description: A large break LOCA occurred approximately 7.5 hours ago. The ECCS pumps are currently operating in the cold leg recirculation mode. The candidate is directed to transfer the ECCS pumps to the hot leg recirculation mode using 19014-C. The SI pump 'B' to the hot legs isolation valve will not open, so SI pump 'B' will have to be realigned to cold leg recirculation. All other ECCS pumps will be aligned for hot leg recirculation.</p> <p>(RO / SRO-I / SRO-U)</p> <p>011EA1.11 RO 4.2 SRO 4.2</p>	A, EN, L, M, S	3
<p>c. V-NRC-JP-19012-HL19: Isolate Accumulators During Post-LOCA Cooldown</p> <p>Description: The reactor was tripped following a LOCA, and a cooldown and depressurization were performed. Adequate RCS subcooling and pressurizer level are available to isolate the SI accumulators. The candidate is directed to isolate the SI accumulators using 19012-C. One accumulator isolation valve will fail to close, which will require the candidate to vent the non-isolable accumulator.</p> <p>(RO / SRO-I)</p> <p>WE03EA1.1 RO 4.0 SRO 4.0</p>	A, EN, L, M, S	4P

<p>d. V-NRC-JP-13610-HL19: Restore TDAFW Flow with Actuation Signal Present</p> <p>Description: A reactor trip occurred due to a loss of main feedwater, which led to a loss of heat sink. All SG WR levels are less than 9%, and RCS bleed and feed has been initiated. The TDAFW pump tripped on overspeed and is ready to be returned to service. The candidate will be required to reset and restart the TDAFW pump and restore AFW flow to the SGs using 19231-C.</p> <p>(RO / SRO-I)</p> <p>WE05EA1.1 RO 4.1 SRO 4.0</p>	D, EN, L, S	4S
<p>e. V-NRC-JP-13125-HL19: Reduce Containment Pressure Following an Inadvertent CVI</p> <p>Description: A containment pressure relief using the purge system was in progress when an inadvertent CVI occurred due to a faulty slave relay. Following repair and testing of the faulty relay, the candidate will be required to re-initiate containment pressure relief and lower containment pressure to zero ± 0.1 psig using 13125-1.</p> <p>(RO / SRO-I)</p> <p>103A1.01 RO 3.7 SRO 4.1</p>	M, S	5
<p>f. V-NRC-JP-13830-HL19: Synchronize Main Generator to the Grid</p> <p>Description: The unit is starting up following a refueling outage. The main turbine is at 1800 rpm and generator excitation has been established. The candidate will use 13830-1 to synchronize the main generator to the grid. One phase will not indicate current, which will require tripping the main turbine.</p> <p>(RO / SRO-I)</p> <p>062A4.07 RO 3.1* SRO 3.1*</p>	A, D, S	6
<p>g. V-NRC-JP-13301-HL19: Manually Align Control Room Isolation on High Radiation</p> <p>Description: The unit is at 100% power when high radiation is detected in the control room ventilation. Control Room Isolation (CRI) fails to automatically actuate, so the candidate will be required to manually align the control room ventilation system using 13301-C.</p> <p>(RO / SRO-I / SRO-U)</p> <p>061AA1.01 RO 3.6 SRO 3.6</p>	D, EN, S	7

<p>h. V-NRC-JP-19253-HL19: Respond to Containment High Radiation</p> <p>Description: The unit was at 100% power when a LOCA occurred. While performing the actions for the loss of reactor coolant, the containment area radiation monitors indicate greater than 750 mrem/hour. To respond to the high containment radiation level, the candidate will be required to perform the actions of 19253-C to isolate containment and to place the required containment ventilation units in service.</p> <p>(RO)</p> <p>WE16EA1.1 RO 3.1</p>	<p>D, L, S</p>	<p>9</p> <p><u>RO ONLY</u></p>
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In-Plant Systems [@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
<p>i. V-NRC-JP-13405-HL19: Place Train 'B' Battery Charger 1BD1CA in Service</p> <p>Description: Unit 1 experienced a loss of 125 VDC bus 1BD1 due to an electrical fault. After repairs to bus 1BD1 are complete and battery 1BD1B is placed in service, the candidate will be directed to locally place battery charger 1BD1CA in service using 13405-1.</p> <p>(RO / SRO-I)</p> <p>058AA1.03 RO 3.1 SRO 3.3</p>	D, E, L	6
<p>j. V-NRC-JP-18038-HL19: Locally Energize Train 'A' Switchgear Following Local Diesel Start</p> <p>Description: The control room has been evacuated and control has been established at the shutdown panels. DG2A has been locally started. The candidate will locally energize Unit 2, Train 'A' 4160 VAC and 480 VAC buses, two NSCW pumps, and one MDAFW pump using Attachment B of 18038-2.</p> <p>(RO / SRO-I / SRO-U)</p> <p>068AA1.21 RO 3.9 SRO 4.1</p>	D, E, L	8
<p>k. V-NRC-JP-17213-HL19: Respond to 1-RE-0018 Alarm During a Liquid Radwaste Release</p> <p>Description: 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.</p> <p>(RO / SRO-I / SRO-U)</p> <p>059AA2.05 RO 3.6 SRO 3.9</p>	A, D, E, P, R	9
<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	4-6 / 4-6 / 2-3	
(C)ontrol room		
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$	
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$	
(EN)gineered safety feature	- / - / ≥ 1 (control room system)	
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$	
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$	
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)	
(R)CA	$\geq 1 / \geq 1 / \geq 1$	
(S)imulator		

ES 301-3

Facility: Vogtle 1 & 2		Date of Examination: 05/12/2014		Operating Test Number: 2014-301	
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).	avg	AV	gao	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	avg	AV	gao	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	avg	AV	gao	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	avg	AV	gao	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	avg	AV	gao	
2. Walk-Through Criteria		--	--	--	
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> initial conditions initiating cues references and tools, including associated procedures reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee operationally important specific performance criteria that include: <ul style="list-style-type: none"> detailed expected actions with exact criteria and nomenclature system response and other examiner cues statements describing important observations to be made by the applicant criteria for successful completion of the task identification of critical steps and their associated performance standards restrictions on the sequence of steps, if applicable 	avg	AV	gao	
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.	avg	AV	gao	
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.		avg	AV	gao	
Printed Name / Signature		Date			
a.	Author <u>Ken Jenkins / [Signature]</u>	<u>04/25/14</u>			
b.	Facility Reviewer(*) <u>AL Sweet / [Signature]</u>	<u>04/25/14</u>			
c.	NRC Chief Examiner (#) <u>[Signature] / J. Amanda Toth</u>	<u>4/30/2014</u>			
d.	NRC Supervisor <u>Eugene Guthrie / [Signature]</u>	<u>5/6/14</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

ES 301-4

Facility: Vogtle 1 & 2		Date of Exam: 05/12/2014		Scenario Numbers: 1 / 2 / 3 / 4		Operating Test No.: 2014-301	
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.	avg	A21	gas			
2.	The scenarios consist mostly of related events.	avg	A21	gas			
3.	Each event description consists of <ul style="list-style-type: none"> the point in the scenario when it is to be initiated the malfunction(s) that are entered to initiate the event the symptoms/cues that will be visible to the crew the expected operator actions (by shift position) the event termination point (if applicable) 	avg	A21	gas			
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.	avg	A21	gas			
5.	The events are valid with regard to physics and thermodynamics.	avg	A21	gas			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	avg	A21	gas			
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.	avg	A21	gas			
8.	The simulator modeling is not altered.	avg	A21	gas			
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.	avg	A21	gas			
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.	avg	A21	gas			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	avg	A21	gas			
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).	avg	A21	gas			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	avg	A21	gas			
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--	--	--	
1.	Total malfunctions (5-8)	8 / 8 / 7 / 6		avg	A21	gas	
2.	Malfunctions after EOP entry (1-2)	3 / 4 / 2 / 1		avg	A21	gas	
3.	Abnormal events (2-4)	4 / 5 / 5 / 4		avg	A21	gas	
4.	Major transients (1-2)	1 / 1 / 1 / 3		avg	A21	gas	
5.	EOPs entered/requiring substantive actions (1-2)	2 / 2 / 2 / 3		avg	A21	gas	
6.	EOP contingencies requiring substantive actions (0-2)	0 / 0 / 0 / 1		avg	A21	gas	
7.	Critical tasks (2-3)	(EOP CTs) 4 / 4 / 4 / 2 (Total CTs) 4 / 4 / 7 / 4		avg	A21	gas	

ES 301-5

Facility: Vogtle 1 & 2			Date of Exam: 05/12/2014			Operating Test No.: 2014-301												
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							
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N							
		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					
RO <input type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input checked="" type="checkbox"/>	RX				5			7				2			3	1	1	0
	NOR	4			4			5				1			4	1	1	1
	I/C	1, 2, 3, 5, 6, 9, 10			1, 2, 3, 6, 9, 10, 11			1, 2, 3, 4, 6, 9, 10				3, 4, 5, 6, 7, 9			27	4	4	2
	MAJ	7			7			8				8, 10, 11			6	2	2	1
	TS	1, 6			2, 6			2, 6				5, 6			8	0	2	2
RO <input checked="" type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>	RX				5			7				2			3	1	1	0
	NOR		4		4			5							3	1	1	1
	I/C		1, 3, 6, 8, 9		3, 8, 9, 11			2, 4, 6, 10				3, 4, 9			16	4	4	2
	MAJ		7		7			8				8, 10, 11			6	2	2	1
	TS														0	0	2	2
															0	1	1	0
RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	RX																	
	NOR						5			7				1	3	1	1	1
	I/C			2, 5, 10			1, 2, 6, 10			1, 3, 9				5, 6, 7	13	4	4	2
	MAJ			7			7			8				8, 10, 11	6	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.

ES 301-6

Facility: Vogtle 1 & 2

Date of Examination: 05/12/2014

Operating Test No.: 2014-301

Competencies	APPLICANTS											
	RO <input checked="" type="checkbox"/>				SRO-I <input checked="" type="checkbox"/>				SRO-U <input checked="" type="checkbox"/>			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	1, 2, 3, 5, 6, 7, 8, 9, 10	1, 2, 3, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 6, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 5, 6, 7, 8, 9, 10	1, 2, 3, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 6, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 5, 6, 7, 8, 9, 10	1, 2, 3, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 6, 8, 9, 10	3, 4, 5, 6, 7, 8, 9, 10, 11
Comply With and Use Procedures (1)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Operate Control Boards (2)	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11				
Communicate and Interact	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Demonstrate Supervisory Ability (3)					1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Comply With and Use Tech. Specs. (3)					1, 6	2, 6	2, 6	5, 6	1, 6	2, 6	2, 6	5, 6

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.

ES 401-4

K/A listed in column 2 is the rejected K/A

Tier / Group	Randomly Selected K/A	Reason for Rejection
T1G1 RO	015AA1.04	<p>Vogtle's RCPs are not fan cooled; they are oil cooled with a heat exchanger that rejects heat to the ACCW system. Vogtle does not even have area fans that directly cool the RCPs. They are in an open space inside the bio-shield that has general area cooling.</p> <p>NRC Chief Examiner randomly selected 015AA1.23 as the replacement K/A.</p>
T2G2 RO	075K2.03	<p>Vogtle's only inter-connection between the NSCW system and Circulating Water system is the electrical distribution system, though NSCW has a 1E power supply and the Circulating Water system has a non-1E power supply.</p> <p>NRC Chief Examiner randomly selected 001K2.03 as the replacement K/A.</p>
T1G1 RO	WE11G2.2.4	<p>Vogtle does not have any Unit differences associated with a Loss of Emergency Coolant Recirculation.</p> <p>NRC Chief Examiner randomly selected WE11G2.1.25 as the replacement K/A.</p>
T2G1 RO	010K6.04	<p>A loss of the PRT has no operational impact on the pressurizer pressure control system. If the PRT overheated and/or overpressurized, the rupture disks would blow, but there would be no effect on the pressure control system.</p> <p>NRC Chief Examiner randomly selected 010K6.02 as the replacement K/A.</p>
T2G2 SRO	055G2.4.42	<p>After discussions with the NRC Chief Examiner, it was determined that developing an SRO-only question linking condenser air removal and Tech Spec entry conditions is difficult. After attempting to write an acceptable question, a decision was made to replace the K/A.</p> <p>NRC Chief Examiner randomly selected 055G2.1.23 as the replacement K/A.</p>

ES 401-6

Facility: Vogtle 1 & 2

Date of Exam: ^{Week of 5/26/2014} 05/12/2014 - 05/13/2014

Exam Level: RO ☒ SRO ☒

Item Description	Initial					
	a	b*	c*			
1. Questions and answers are technically accurate and applicable to the facility.	yes	A2	yes			
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	yes	A2	yes			
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	yes	A2	yes			
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).			yes			
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 <u>x</u> the licensee certifies that there is no duplication; or ___ other (explain)	yes	A2	yes			
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 29 / 8	Modified 16 / 8	New 30 / 9	yes	A2	yes
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 36 / 11	C/A 39 / 14		yes	A2	yes
8. References/handouts provided do not give away answers or aid in the elimination of distractors.				yes	A2	yes
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.				yes	A2	yes
10. Question psychometric quality and format meet the guidelines in ES Appendix B.				yes	A2	yes
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.				yes	A2	yes

Printed Name / Signature

a. Author Ken Jenkins / 942

b. Facility Reviewer (*) AL Sweet / 101

c. NRC Chief Examiner (#) J. Amador / 101

d. NRC Regional Supervisor Eugene Guthrie / 101

Date

04/25/14

04/25/14

4/30/14

5/6/14

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.

ES 401-9

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation												
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only															
<p>Instructions</p> <p>[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]</p> <ol style="list-style-type: none"> Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level. Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable). Check the appropriate box if a psychometric flaw is identified: <ul style="list-style-type: none"> The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information). The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc). The answer choices are a collection of unrelated true/false statements. The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable. One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem). Check the appropriate box if a job content error is identified: <ul style="list-style-type: none"> The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content). The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory). The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons). The question requires reverse logic or application compared to the job requirements. Check questions that are sampled for conformance with the approved K/A and those that are <i>designated SRO-only</i> (K/A and license level mismatches are unacceptable). Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of ES-401 Section D.2.f. Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory? At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met). 																												
Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation												
<p>Key/Summary</p> <p>Question distribution:</p> <table border="1"> <thead> <tr> <th></th> <th>RO</th> <th>SRO</th> </tr> </thead> <tbody> <tr> <td>Bank</td> <td>32 (8 previous NRC exam, 4 of which are within last 2 exams)</td> <td>8 (4 previous NRC exam, 2 of which are within last 2 exams)</td> </tr> <tr> <td>Modified</td> <td>16 (12 modified from previous NRC exams)</td> <td>8</td> </tr> <tr> <td>New</td> <td>27</td> <td>9</td> </tr> </tbody> </table>																RO	SRO	Bank	32 (8 previous NRC exam, 4 of which are within last 2 exams)	8 (4 previous NRC exam, 2 of which are within last 2 exams)	Modified	16 (12 modified from previous NRC exams)	8	New	27	9	S	Indicates SAT: 18 SRO, 40 RO (initial submittal) 25 SRO, 75 RO SAT in final submittal
	RO	SRO																										
Bank	32 (8 previous NRC exam, 4 of which are within last 2 exams)	8 (4 previous NRC exam, 2 of which are within last 2 exams)																										
Modified	16 (12 modified from previous NRC exams)	8																										
New	27	9																										
															E	Indicates Enhancement: 2 SRO, 22 RO (initial submittal)												
															U	Indicates UNSAT: 4 SRO, 7 RO (initial submittal)												
															U/E	Indicates UNSAT/ENHANCEMENT (likely due to two non-plausible distractors that are the same, as in a 2x2, i.e., the same distractor counted 2x as non-plausible) 1 SRO, 6 RO (initial submittal)												
															(pre)	Indicates presubmitted question comments												

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(1) 64	F	2												B	S	075K2.03 Replaced with 001 K2.03 on 10/3/2013 Question appears to match the KA. Question appears to be SAT. JAT 3/11/2014
(2) 28	H	2												N	S	003A3.04 Question appears to match the KA. RCS flow is used to determine which RCPs tripped due to underfrequency. Question appears to be SAT. JAT 3/11/2014 Final submitted question is SAT. JAT 4/25/2014
(3) 29	H	2												B	S	004K6.09 Question appears to match the KA. Question appears to be SAT. JAT 3/12/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(4) 30	H	3				X								N	U	<p>005A2.02</p> <p>Question appears to match the KA.</p> <p>What is the basis for the plausibility of the two parts of distractor A together? If the applicant thinks that the charging considerations outweigh the RHR cooldown, stopping the RHR pump would serve to further exacerbate the pressure increase.</p> <p>Similarly, for distractor D, if the applicant has the misconception that the pressure decrease due to cooldown outweighs the pressure increase from charging (or discounts any pressure increase), why would they choose to stop the charging pump rather than the RHR pump?</p> <p>A simple fix to this question may be to ask in part (2):</p> <p>“Per 18028-C, “Loss of Instrument Air,” to mitigate the pressure transient, the crew [will/will not] stop RHR pump ‘B’.”</p> <p>The two parts of each distractor become more plausible with each other because the applicant does not have to choose CCP or RHR pump, they must make a determination on the RHR pump alone. (Please ensure that there is one and only one correct answer if the question is asked this way –the way I read 18028-C, an RHR pump is stopped only if you have two running, and the question sets them up to have only one running, which would make [will not] the correct answer for part 2.)</p> <p>JAT 3/12/2014</p>
															S	Final submitted question is SAT. JAT 4/25/2014
(5) 19	F	2												N	E	<p>005AK3.05</p> <p>Question appears to match the KA.</p> <p>Recommend adding “per 18003-C” to the beginning of the part (2) question so there is no question that 18003-C refers to both parts of the question.</p> <p>Otherwise, question appears to be SAT. JAT 3/12/2014</p>
															S	Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(6) 31	H	2				X	?							N	E/U	<p>005K5.09</p> <p>Question appears to match the KA.</p> <p>Need to make sure that a successful argument cannot be made for two correct answers: is it written anywhere that a chemical addition is to be considered a dilution, regardless of how negligible? If not, is it an operations expectation that chemical additions be considered to be a dilution? There needs to be a definitive answer in the event that someone chooses the wrong answer and appeals the question based on the fact that the dilution amount is negligible.</p> <p>Not sure that 4h in an 8h period is plausible. However, the specification states less than or equal to one hour, so you can rework the part (2) question to ask something to the effect of:</p> <p>"...and, per TS 3.9.5, RHR pump 'B' [is/is not] required to be returned to service within 1 hour of being stopped."</p> <p>JAT 3/12/2014</p>
															S	Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(7) 32	H	2					X							M	E	<p>006A1.06</p> <p>Question appears to match the KA.</p> <p>Will re-actuating SI accomplish the same thing as restarting SIP B? If so, then there is arguably more than one correct answer, since the 19012-C foldout page states to “Operate ECCS pumps as necessary” under “SI Reinitiation Criteria”. If the pumps operate, especially without causing harm to the system, an argument in favor of simply re-actuating SI can be made since the end result is the same.</p> <p>To eliminate this problem, and to keep the question at the RO level, I would put a condition in the stem that will give an indication that containment is/is not adverse, and then give subcooling in the second part of the question as somewhere between 24 and 38F. Then you can query on SIP B [is/is not] required to be restarted.</p> <p>Additionally, consider moving the information from the part (2) question to a conditions heading:</p> <p><u>Initial Conditions:</u></p> <p>[same as you have]</p> <p><u>Intermediary condition:</u></p> <p>-CCP ‘A’ is stopped per 19012-C.</p> <p><u>Current conditions:</u></p> <p>-SIP ‘B’ is stopped per 19012-C.</p> <p>-Subcooling margin is [between 24 and 38F] and lowering</p> <p>-[whatever info is needed for adverse/non-adverse containment]</p> <p>WOOF Completes the following statements?</p> <p>(1) When CCP ‘A’ was stopped, RCS subcooling margin INITIALLY [increased/decreased].</p> <p>(2) Based on the current conditions, the OATC [is/is not] required to restart SIP ‘B’</p> <p>JAT 3/12/2014</p> <p>S Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(8) 33	H	2				X							X	B	U	<p>006G2.4.47</p> <p>Question appears to match KA.</p> <p>ES 401-5 states that the reference to be provided is step 18, Figure 1, and table 1 of 19111-C, however, the page numbers listed actually correspond to steps 18-24 of 19111-C.</p> <p>Additionally, this question essentially gives the RO a number of parameters and then has them navigate 19111-C. Although the procedural steps are provided to the RO, the question is still asking the RO a question that appears to be at the SRO-only level.</p> <p>Also, since the procedure steps are provided, distractor D is not plausible (you want the distractor to be plausible because the applicant has a misconception, not because they misread something that is provided to them).</p> <p>I would recommend either replacing the question or reframing the question and placing the applicant at the step 18.b RNO for determining the minimum ECCS flow required using the following: TABLE 1 or FIGURE 1. If you decide to keep the question, you may write out the verbiage in the step 18.b RNO, but I would not give them the whole procedure. (Or even the excerpted procedure, apart from what you write out in the stem of the question.) You may provide them Figure 1 and Table 1.</p> <p>JAT 3/12/2014</p> <p>S</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(9) 34	H	2												M HL17 007 A2.06	S	<p>007A2.02</p> <p>Question appears to match the KA.</p> <p>Question appears to be SAT. JAT 3/12/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(10) 1	H	2												B	S	<p>007EA2.06</p> <p>Question appears to match the KA.</p> <p>Question appears to be SAT. JAT 3/12/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(11) 35	H	2												M	S	008A1.03 Question appears to match the KA. Question appears to be SAT. JAT 3/12/2014 Final submitted question is SAT. JAT 4/25/2014
(12) 2	F	2												B HL15 009 EK2.03	E	009EK2.03 Question appears to match the KA. To avoid any possible problems with using the word "ONLY," recommend rephrasing the part (2) question to: "Natural circulation [is/is not] used in conjunction with break flow to accomplish decay heat removal." Otherwise, question appears to be SAT. JAT 3/12/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(13) 36	F	2												N	E	010A3.02 Question appears to match the KA. The part (2) answer choices can be read as "both PORVs..." meaning two PORVs, or "both PORVs" meaning the PORVs AND something else. What you are really asking in the part (2) answer choices is whether the PORV block valves close, I would simply ask that: "if pressure lowers to 2185 psig, both PORV block valves [will/will not] receive a close signal." There may be too much overlap between this question and 010K6.04. This question meets the KA with just the part about the PZR heaters, so you could ask something different for this part (2) question (if the part about the stuck open block valve in the next question does not change). JAT 3/12/2014
															S	Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
(14) 37	H	2											X		M HL15 007 K1.01	U	010K6.04 Question does not appear to match the KA. The KA asks about the effect of a loss/malfunction of PRT on the Pressurizer Pressure Control System, whereas the question appears to primarily be asking about the indications of a loss of the PRT and a stuck open PORV. The licensee did ask about the KA match for this question previously and did mention that it was previously used on an NRC exam with this specific KA. As such, the “U” for KA match will not be counted in the overall total number of “U” questions towards grading the submittal SAT/UNSAT. However, given that the question is predominantly asking about GFE material and is not really asking anything about the PZR PCS, the question needs to be modified/replaced. Additionally, there may be too much overlap between information contained in the stem of this question and knowledge that is asked for in the previous question (010A3.02). Although this question puts the applicant at a much lower pressure than the previous question, there is indication in the stem of the question that the PORV block valves are supposed to automatically close (and in this case they have not). One option is to add information to the stem regarding the PRT. For example, you could state that PRT temperature increased to 338F and is now at 212F (with no operator action). You could then ask what repercussions this would have on the PZR PCS. If there is no impact on the PZR PCS, we can replace the KA (in which case, you would not have to modify question 010A3.02). JAT 3/12/2014 Changed KA to 010K6.02 . JAT 3/25/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(15) 3	H	2												N	E	011EK2.02 Question appears to match the KA. Recommend rephrasing the part (2) question to eliminate use of the word "ONLY" in the answer choices: "Following alignment to Cold Leg Recirculation, SIPs [are/are not] providing injection FLOW to the core." Otherwise, question appears to be SAT. JAT 3/12/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(16) 56	H	2												B	S	011K6.03 Question appears to match the KA. Question appears to be SAT. JAT 3/12/2014 Final submitted question is SAT. JAT 4/25/2014
(17) 38	F	2												B	S	012K5.01 Question appears to match the KA. Question appears to be SAT. JAT 3/12/2014 Final submitted question is SAT. JAT 4/25/2014
(18) 39	F	3												B HL18 K6.01	S	013K6.01 Question appears to match the KA. Question appears to be SAT. JAT 3./12/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(19) 57	F	2												B	E	014A1.02 Question appears to match the KA. I understand that these are indications that would be received for a simultaneous Data A and Data B failure. However, if H2 is a low worth rod, if it did drop, would any additional alarms come in? If not, then I recommend choosing a higher worth rod, and then adding "no other alarms are received." If you WOULD get other alarms with the rod drop (high neutron flux, etc), then just add "No other alarms are received" to your existing question. Otherwise, question appears to be SAT. JAT 3/12/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(20) 58	F	2												N	S/E	015A2.04 Question appears to match the KA. Consider adding "All PR Nis are OPERABLE." It is probably not necessary (the applicant should not assume they are inoperable, per NUREG 1021 Appx E), but I also don't want anyone to try and argue "no correct answer" if they miss it. Question appears to be SAT. JAT 3/12/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(21) 4	F	2				?								B	S?	015A1.04 Replaced with AA1.23 on 10/3/2013. Question appears to match the KA. Are there other ARPs that direct monitoring of parameters on the plant computer? If so, question appears to be SAT. If, however, the plant computer is not used by the ARPs to monitor RCP parameters, the plausibility of the part (1) distractors is questionable. JAT 3/12/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(22) 5	H	2												N	S	022AK3.01 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	B/M/N	U/E/S	
(23) 40	H	2												B SONGS 2006 NRC	U/E	022K3.02 Question appears to match the KA. Part (2) distractor appears to be implausible. If the candidate believes the reference leg to be open, then both temperature and pressure would have an impact on the level instrument readings. Thus, since they have to choose between temperature and pressure, logic (rather than direct knowledge) can be used to eliminate A(2) and C(2) as possible choices. An easy fix to correct this is to simply ask: “...the instrument inaccuracies [are/are not] a DIRECT result of changes in containment pressure.” That way, the distractor cannot be eliminated using a logic argument - the applicant has to know that the reference leg is closed rather than open. JAT 3/13/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(24) 20	F	2				X								N	U/E	024AG2.2.22 Question appears to match the KA. Per TRM 13.1.7, there is an immediate action to enter the applicable TS (3.5.4) when the RWST is inoperable, and therefore it is an RO knowledge item to know those conditions which render the RWST inoperable. Boron concentration is one of the items, and is therefore a required memory item at the RO level, even though the actual specification for boron concentration outside of SR limits is an 8h LCO action (which would normally not be considered RO knowledge). However, BAST boron concentration is associated with a 72h TRM action statement. Barring a specific learning objective or licensee statement that states that ROs are required to possess this knowledge, this distractor is implausible because RO's are not required to know this number. JAT 3/13/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(25) 41	F	2												B Farley 2010 NRC	S	026K1.01 Question appears to match the KA. Question appears to be SAT. Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(26) 42	H	2												M HL 18 NRC 062 K1.02	E (pre)	026K2.02 001 Question appears to match the KA. Answer choices could be cleaned up by asking: 1HV-9001A is __ (1) __ and 1HV-9001B is __ (2) __. Then all choices can toggle between energized/de-energized. Question appears to be okay. JAT 12/19/2013
															S (pre2)	Comment incorporated. JAT 2/4/14
															S	Question is the same as the resubmitted presubmitted question. Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(27) 6	H	2												M HL15 027 AK2.03	S	027AK2.03 Question appears to match the KA. Regarding possible overlap between this question and question 010A3.02: 010A3.02 requires knowledge of the actual pressure at which backup heaters turn on. This question requires knowledge of the difference between the controlling channel and the backup channel – knowledge of the specific pressure at which heaters turn on is not required because the controller fails LOW. This question elicits knowledge of whether the specific channel controls operation of the backup heaters. Thus, these two questions are independent and do not create a “double jeopardy” situation. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(28) 59	H	2		X										N	E	028K1.01 Question appears to match the KA. The part (2) statement should say “... a(n) __ (2) __ path entry...” so that the correct answer is not discounted due to not fitting into the statement grammatically. Otherwise, question appears to be SAT. JAT 3/13/2014
															S	Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(29) 7	F	2												N	S	029EG2.4.34 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(30) 21	H	2												M LOR	S	033AG2.2.44 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(31) 60	F	2												N	S	034A4.01 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(32) 8	H	2				X								N	U/E (pre)	<p>038EA2.05</p> <p>Question appears to match the KA.</p> <p>Need to make sure that EOP Background information is RO knowledge.</p> <p>The question itself should reference the document being used to support the correct answer:</p> <p style="padding-left: 40px;">“In accordance with <19030-C> intact SG AFW flow rates...” and “in accordance with <E-3 WOG Background Document>, the reason...”</p> <p>There appear to be 2 non-plausible distractors: why would someone choose B (raise AFW flow to intact SGs due to excessive swell) or C (lower AFW flow to intact SGs due to excessive shrink)?</p> <p>The answer choices do not need to explicitly call out shrink and swell to match the KA. Testing understanding of AFW reinitiation vs. MSL isolation tests the same concept without leading. One possible idea is to ask:</p> <p>“In accordance with 19030-C step 14, intact SG AFW flow rates are ____ (1) ____ and then cooldown is initiated per step 17 using ____ (2) ____.”</p> <ul style="list-style-type: none"> A. Raised to prevent AFW reinitiation/intact SG ARVs B. Raised to prevent AFW reinitiation/steam dumps C. Lowered to prevent MSL isolation upon initiation of the cooldown/intact SG ARVs D. Lowered to prevent MSL isolation upon initiation of the cooldown/steam dumps <p>The stem will likely need some more information to bolster the correct answer (i.e., preferred cooldown method given the conditions of the stem), but the KA is met with the first part of the question and the distractors are all plausible.</p> <p>JAT 12/19/2013</p>
															S (pre2)	<p>New question incorporated above suggestion. JAT 2/4/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only				
																S	Question is the same as resubmitted presubmitted question, which incorporated the above suggestion. Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Revised question to remove reason and tightened up language. Lack of consensus from VG as to whether background information was RO knowledge, so “reason” aspect was removed. KA still met because a “consequence” of shrink and swell is that AFW flow will need to be raised. Question appears to be okay. JAT 4/1/2014 Final submitted question is SAT. JAT 4/25/2014
(33) 43	H	2												M HL 17 041 K3.02	E	039K4.02 Question appears to match the KA. Recommend adding, “With no operator action, RCS temperature...” to the question statement.	
															S	Otherwise, question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014	
(34) 9	H	2				X								N	S/E	040AG2.2.36 Question appears to match the KA. This is a difficult to meet KA, given this particular pairing of SL Rupture with effect of maintenance activities on status of LCOs. However, in this case, LCO 3.8.1 requires sequencers to be OPERABLE. The candidate is required to know that this particular maintenance item does not render the sequencer inoperable, and that it will perform its required function in an ESF actuation due to a steam line rupture. To lend plausibility to the containment High-2 distractor, recommend adding a time (i.e., the presence of an implied rate for SG pressure but not for containment pressure lowers the plausibility of containment High-2 as a distractor). Otherwise, question appears to be SAT. JAT 3/13/2014	
															S	Final submitted question is SAT. JAT 4/25/2014	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(35) 61	H	2												N	S	<p>045K5.17</p> <p>Question appears to match the KA.</p> <p>Part (1) question appears to be particularly easy. However, given that there are competing pressure effects occurring, while it SHOULD be general knowledge which of these effects is greater, there is at least some plausibility to the distractor. However, I would add "while maintaining Tavg on program" somewhere in the first statement to lend more plausibility to the distractor.</p> <p>Otherwise, question appears to be SAT. JAT 3/13/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(36) 10	H	2	X											N	E	<p>054AA1.02</p> <p>Question appears to match the KA.</p> <p>The question statement implies that for some reason the MDAFW Pumps are not currently running (by virtue of the fact that the SS directs starting all pumps), however, the correct answer states that they should already be running because they received an auto start signal when the MFP was tripped. I recommend changing the statement about the SS to something like, "the SS states to ENSURE all AFW pumps running." Then you can ask the question the way it is.</p> <p>JAT 3/13/2014</p>
															S	<p>Final submitted question is SAT. JAT 4/25/2014</p>
(37) 11	H	2												B HL18 056 AK3.02	S/E	<p>055EK1.02</p> <p>Question appears to match the KA.</p> <p>To bolster plausibility of the distractors, is it possible to turn the question into a 2x2? The first part can toggle between injecting nitrogen and voiding in the reactor vessel. The second part can toggle between disrupting natural circulation and something else plausible.</p> <p>JAT 3/13/2014</p>
															S	<p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(38) 12	F	2				?						?	?	N	U?	<p>056AK1.01</p> <p>Not sure that question matches the KA. Natural convection vs. natural circulation?</p> <p>Terminology of deltaT rising/lowering: is this common terminology for Vogtle? Would it be clearer if this part toggled between increase/decrease?</p> <p>The knowledge of 74F vs 124F is a fairly specific procedural knowledge requirement – need to ensure that this is required knowledge and not minutia. Is there an RO learning objective associated with this number? I’m reluctant to have this be used for an RO question because there are SRO questions that were justified as SRO only based on specific procedural knowledge requirements similar to this one.</p> <p>JAT 3/13/20114</p> <p>Question revised. Natural convection aspect met with CRDM fan part. Also, natural circulation and natural convection are generally interchangeable, and this more closely meets the KA in that it asks about the convection provided by the CRDM fans. New question matches KA and was revised to remove specific 74F vs 124F knowledge. JAT 4/2/2014</p>
															S	Final submitted question is SAT. JAT 4/25/2014
(39) 13	F	2					X							B	E	<p>057AK3.01</p> <p>Question appears to match the KA.</p> <p>Subset issue – part (1) of A and B is not actually wrong – if bus voltage lowers to less than 100 VDC, the operator would still be required to remove 1DD1 from service. Recommend changing current condition 3rd bullet to “1DD1 bus voltage is XXX and lowering” (choose whatever voltage you want to get the answer you want) and ask: “Per 19100-C, 1DD1 [is/is not] required to be removed from service using 1343101, “120 VAC Vital Instrument Distribution System” at this time,”</p> <p>And “19100-C contains direction for removing batteries from service to prevent _____”</p> <p>Another option for solving the subset issue is to give a series of times and then ask the earliest time at which 1DD1 is required to be removed from</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
															S	service. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(40) 44	H	2				X								N	E/U	059A4.03 Question appears to match the KA. It seems unlikely that MFP speed would remain constant at 30% power (plausibility of part (1) distractor). One option for this question is to actually ask the part (2) question as a 2x2. KA is still met because main feedwater is being supplied through the BFRVs: "As power increases, the BFRVs will continue to throttle open until [fully open/reaching a prescribed steam flow] and will then [remain as-is/fully close]." JAT 3/13/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(41) 22	F	2												B LOR	S	059AK2.02 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(42) 45	F	2												B HL16 059 K4.19	E	059K4.19 Question appears to match the KA. All 4 part (1) answer choices contain "closing all FWI valves." Recommend changing the part (1) statement to: "Both MFPTs [are/are not] tripped." (or something similar) This removes any confusion surrounding the word only, and bolsters the plausibility of the part (1) distractor. Otherwise, question appears to be SAT. JAT 3/13/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(43) 23	F	2												B HL18 Audit 072 A4.01	S	061AA2.03 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(44) 46	F	2												B HL16 061 K2.01	S	061K2.01 Question appears to match the KA. Consider making the statements complete thoughts for ease of reading: “A loss of Train ‘C’ __ (1) __ has occurred, and a loss of Train ‘B’ __ (2) __ has occurred.” Otherwise, question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(45) 47	H	3												M HL17 063 K3.01	S	062K3.02 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(46) 48	H	2				X					X			N	U/E (pre)	062K4.07 Question appears to match the KA. The last paragraph of “explanation of required knowledge” seems to be missing something between the end of that page and the middle of the sentence that starts on the next page. It seems implausible that a candidate would not know that 1CY1A cannot simultaneously have alternate and normal supply breakers closed – are there many examples of 120VAC distribution panels at Vogtle where this is the case? If not, there are two implausible distractors. The first question asked appears to be somewhat backwards logic – I would recommend stating what the source is for the power (normal or alternate, rather than inverter vs regulating transformer), and then ask if panel 1CY1A is energized or deenergized. This way, the applicant would have to know which source (inverter or regulating transformer) is the normal and which is the alternate source. Additionally, it gets away from teaching in the question (i.e., the way the question is framed, they know that one of the sources of power keeps the panel energized, and if I had to take a guess not knowing anything about the system, I would have guessed the inverter). JAT 12/19/2013
															S/E (pre2)	The new question incorporates the above suggestion, however, more information in the stem may be required. JAT 2/4/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
																<p>S/E The question is the same as the resubmitted presubmitted question. The question appears to match the KA. The question appears to be SAT, however, consider adding the words to the part (2) question so that someone cannot argue that a long time after the LOSP, 1CY1A will be de-energized. (analyze “immediately” or “five minutes” or some other time that would be after a load shed but before 1CY1A would be likely to become deenergized for plausibility)</p> <p>S JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014</p>
(47) 49	H	3					X						X	N	U	<p>063A1.01</p> <p>Question appears to match the KA.</p> <p>Question appears to be requiring TS bases knowledge for RO candidates. Is there a specific requirement at Vogtle that ROs know the battery capacities under specific accident conditions?</p> <p>Part (2) distractor appears to be correct. P&L 2.1.8 states in lieu of or in addition to, so it is not incorrect for an applicant to state that TDAFW would be controlled via the TDAFW pump discharge throttle valves. To eliminate two correct answers, I would choose one of the two and simply query on that: “Per 13610-1, to minimize drain on the C-Train Batteries, TDAFW pump discharge throttle valves [is/is not] permitted to be used to control of the TDAFW flow to the SGs.” (You don’t have to choose the throttle valves to query on; I was demonstrating why there can be considered more than one correct answer in the original question – the answer to the above statement is “is.”)</p> <p>S JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014</p>
(48) 50	F	2												N	S/E	<p>064G2.1.31</p> <p>Question appears to match the KA.</p> <p>The “explanation of required knowledge” and SOP 13145A-1 both refer to momentarily placing the switch in the UNIT position and verifying the blue light lit. The way these are worded implies that either the switch has a neutral position it remains in, or that the light is not lit the whole time. Please clarify.</p> <p>S Otherwise, question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(49) 14	H	2												N	S	065 AA2.08 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(50) 24	F	2				X								B	U	069AA2.02 Question appears to match the KA. Concerning the part (2) distractor: immediately is within one hour. If there can be one and only one correct answer, then "immediately" can be eliminated via a logical argument rather than direct knowledge of the TS action statement. Consider changing the part (2) statement to: "... the latest time the required action of TS 3.6.2 must be completed is [immediately upon discovery/within one hour of discovery]." Regarding the plausibility of the part (1) distractor: are there other examples when an inoperable component is required to be placed in a specific position in order to maintain integrity of something? JAT 3/13/2014 Question changed to query on requirements of TS 3.9.4. Although the question is not in modes 1-4, it still deals with requiring containment closure. Since KA's exist in the Containment system related to "loss of containment integrity during refueling," it is acceptable to have a "Loss of Containment Integrity" question set during a refueling outage.
															S	Final submitted question is SAT. JAT 4/25/2014
(51) 62	F	2												B	S	071A3.03 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(52) 63	F	2											M HL18 072 K1.03	E		072K3.02 Question appears to match the KA. The part (1) answer choices all contain “flashing light.” Consider rephrasing the statement to say, “The personnel in the SFP area [were/were not] alerted to the failed detector by an audible alarm.” This also gets rid of the word “ONLY” from the distractor. For the second question, I would simply ask given the current conditions (with 1RE-008 removed from service), if movement of irradiated fuel is allowed to proceed. It elicits the same required information, but since the applicant does not have to choose one monitor over the other, the distractors will have more plausibility. Alternatively, the part (2) statement can be phrased, “1RE-008 [is/is not] required to be in service for movement of irradiated fuel in the SFP.” Actually, using the second option phrasing is probably more clearly RO knowledge, because RO would be required to know that RE-008 is not one of the detectors called out in the TS, whereas the first way (with the requirements of realigning ventilation, etc,) may not have as clear of a correct answer. [Note: This same HL18 question was modified differently for KA 072K3.02]
														S		JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014
(53) 51	H	2											B	S		073K1.01 Question appears to match the KA. Question appears to be SAT. Final submitted question is SAT. JAT 4/25/2014
(54) 52	H	2											M HL17 003 K2.02	S		076K2.04 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(55) 18	F	3					X							N	E	077AK3.02 Question appears to match the KA. Regarding the plausibility of the part (1) distractor: it is not wrong to say that DGs are maintained in STBY to comply with TS, and without a background document to reference the specific reason, the part (1) distractor cannot be considered completely incorrect. JAT 3/13/2014
															S	Final submitted question is SAT. JAT 4/25/2014
(56) 53	H	2												B	S	078A4.01 Question appears to match the KA. Question appears to be SAT. JAT 3/13/2014 Question still appears okay. JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014
(57) 65	F	2												B	S	086K4.02 Question appears to match the KA. Question appears to be SAT. JAT 3/14/2014 Question still appears to be okay. JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014
(58) 54	F	2												B	S	103A2.03 Question appears to match the KA. Question appears to be SAT. JAT 3/14/2014 Question still appears to be okay. JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014
(59) 55	F	2												N	S	103K1.08 Question appears to match the KA. Question appears to be SAT. JAT 3/14/2014 Question still appears to be okay. JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(60) 66	F	2				X								B	U	<p>G2.1.14</p> <p>Question appears to match the KA.</p> <p>The part (1) distractor is implausible. It is unlikely that an applicant would choose “shutdown” as requiring an announcement when “startup” is the alternative – i.e., since they have to choose one over the other, essentially, the question is framed such that one of them does not require an announcement. The same holds true for the part (2) distractor, although it is less blatant what the correct answer should be. As such, I recommend you choose the shutdown for the first question and either hot leg recirc or cold leg recirc for the second question, and query on those:</p> <p>“Plant announcements [are/are not] required per UOP 12005-C for reactor shutdowns, and plant announcements [are/are not] required per EOP 19014-C prior to transition to Hot Leg Recirc.”</p> <p>JAT 3/11/2014</p>
															S	<p>New question submitted. New question matches the KA. New question is okay. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(61) 67	F	2												M HL18 072 K1.03	E	<p>G2.1.28</p> <p>Question appears to match the KA.</p> <p>Recommend rephrasing the part (1) question to query on whether B FHB Post Accident Filter Unit started automatically (rather than having choices of “ONLY one” or “BOTH” started).</p> <p>[Note: This same HL18 question was modified differently for KA 072K3.02]</p> <p>Otherwise, question appears to be SAT. JAT 3/11/2014</p>
															S	<p>Question incorporated change. Question appears okay. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(62) 68	F	2												B HL17 G2.1.8	S	<p>G2.1.8</p> <p>Question appears to match the KA.</p> <p>Please ensure the preferred communications method is required knowledge (i.e., not minutia).</p> <p>Otherwise, question appears to be SAT. JAT 3/11/2014</p> <p>Not considered minutia. Reworded second statement slightly to more closely align with wording of step. Question appears okay. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(63) 69	F	1				X								N	U (pre)	<p>G2.2.15</p> <p>Question appears to match the KA.</p> <p>All of question (2) is LOD=1 – I would expect that all operators should already know the appropriate way to perform a check of a valve, whether it is open or closed.</p> <p>Question (1) is a LOD=1 – the answer for part (1) is a direct lookup from the provided lineup, thereby making all of the other distractors non plausible.</p> <p>Recommend replacing this question. Need to make sure that the selected reference doesn't lend itself to a direct lookup – i.e., you could use a reference for one system where the way another system is aligned impacts the correct answer for the given system. The applicant would need to have plant specific knowledge of the secondary system to know which answer is correct.</p> <p>JAT 12/19/2013</p>
															S* (pre2)	<p>Question is improved, but need to ensure there is only one correct answer. Is "standby alignment" defined anywhere? Is it possible that someone could successfully argue that returning Filter #4 to service and taking filter #8 out of service meets "standby alignment" (thereby possibly having two correct answers to this question)? JAT 2/4/14</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
		1.5														<p>S</p> <p>Question is the same as the resubmitted presubmitted question, with the addition of a bullet in the stem indicating that Filter #8 is to remain in service. Question still appears to match the KA.</p> <p>I'm still concerned about the LOD of the part (1) question regarding the position of the valves after release from tagout. However, given that two references will be provided that give conflicting position information, and the fact that the applicant must decide which reference takes precedence, there is some plausibility lent to the distractor.</p> <p>Question appears to be SAT. JAT 3/11/2014</p> <p>Question appears to be okay. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(64) 70	H	2												N	E	<p>G2.2.23</p> <p>Question appears to match the KA.</p> <p>The plausibility of distractor B is weak – it seems implausible that an applicant could conclude that the LCO was not met for only 5 minutes of a 15 minute test if they did not remember that the valves still receive an automatic open signal. Distractor B might be more plausible if the part (1) distractor for A and B were changed to “10 minutes.” If the applicant does not think that the discharge valves will automatically open, then it would be reasonable to assume that they would think the pump is inoperable from 1000 to 1005 AND from 1010 to 1015.</p> <p>With the above suggestion, I am making the assumption that the LCO not met time is cumulative – if that is not the case, then 5 minutes works. But if it is cumulative, I would think that an operator who thinks the LCO is not met from the point at which the discharge valves are shut to the point at which the pump is running would also think it is not met from the point at which the pump is stopped to the point at which it is placed back in standby alignment. (Also goes to plausibility of distractor A.)</p> <p>Recommend either bolstering the plausibility of the part (1) and part (2) distractors TOGETHER in distractor B, or change the part (1) distractor.</p> <p>JAT 3/11/2014</p>
															S	<p>Change incorporated. Question appears to be okay. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(65) 71	H	2												B	S	<p>G2.3.13</p> <p>Question appears to match the KA.</p> <p>Question appears to be SAT. JAT 3/11/2014</p> <p>Modified the correct answer “significant radiation exposure” to “15 mrem exposure” so that “D” (excessive airborne contamination) cannot be eliminated due to a logic argument. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(66) 72	H	2												B	S	<p>G2.3.15</p> <p>Question appears to match the KA.</p> <p>Question appears to be SAT. JAT 3/11/2014</p> <p>Added “following a refueling outage” to the initial conditions to more clearly narrow down the correct answer. Question is okay. 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(67) 73	F	1						x						N	U (pre)	<p>G.2.3.5</p> <p>Question appears to match the KA, but is not plant-specific and is not at the RO level. Anyone qualified to work in the RCA should know the answer to this question.</p> <p>I recommend replacing this question. Given that the KA is generic and broad (ability to use radiation monitoring systems pretty much lends itself to any detector used to measure radiation), I would ask a question where a radiation monitor is alarming (during fuel handling, during operations, while shut down, etc) and ask the required actions (can be out of an AOP or annunciator response) or ask if a particular AOP is required to be entered (entry conditions for AOPs and EOPs is RO knowledge). This question can be similar to any questions that may also fit a process radiation monitor question. The key is to keep it plant specific and at the level of an operator.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
																<p>E (pre2)</p> <p>JAT 12/19/2013</p> <p>Question is plant specific and appears to match the KA. One thing to note is that there are four distinct answers just with the first part of the question – the part regarding the Essential chillers does not appear needed to answer the question. Additionally, since choice A is not specific as to which train of CREFS starts, it is an outlier. Really, what you’re asking is which train of CREFS starts and on which units. That can be done by asking:</p> <p>Unit 1 Train “A” CREFS [does/does not] start and Unit 2 Train “A” CREFS [does/does not] start.</p> <p>Or something similar... i.e., make it a 2x2, soliciting the answer to two pieces of information, since that’s what the question ultimately boils down to. It doesn’t have to be asked like the example I gave; that’s just a starting point. This way, question psychometrics can’t be used to whittle the choices down, and you also don’t use the word ONLY, which can be problematic. JAT 2/4/14</p> <p>B</p> <p>S</p> <p>Question appears to match the KA. Question takes suggestion (above) into account and queries on Train B CREFS for U1 and U2.</p> <p>Question appears to be SAT. JAT 3/11/2014</p> <p>Question still appears to be okay. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(68) 74	F	2												N	S	<p>G2.4.25</p> <p>Question appears to match the KA.</p> <p>Question appears to be SAT. JAT 3/11/2014</p> <p>Added the word “seismic” to modify “flow path” in the second question to avoid the possibility of two correct answers. Also changed phrase “will/will not automatically initiate water flow” to “will/will not be automatically aligned” Question still appears to be okay. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(69) 75	H	2												M HL17 040 AA1.20	S/E	G2.4.45 Question appears to match the KA. Regarding distractor D – what is the plausibility of the applicant thinking that the conditions describe a steam line break but that a manual SLI is not required? If they can reasonably think that an automatic SLI might occur, than this distractor is plausible and the question is SAT. If there is not a plausible explanation for this combination of the part (1) and part (2) distractors, we may need to consider rewording the question. JAT 3/11/2014
															S	Replaced the second question of the 2x2. Replacement question asks about whether manual SLI is an approved early operator action per the specified procedure. New 2 nd question appears to be easy, but is not LOD=1, therefore the question is okay. JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014
(70) 25	H	3												M HL18 WE02 EA2.1	S	W/E02EA1.3 Question appears to match the KA. Question is not symmetric, however, I think all of the distractors work and are plausible. Question appears to be SAT. JAT 3/14/2014 Question still appears to be okay. JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014
(71) 15	F	2				X								B HL18 WE04 EK2.01	U/E	W/E04 EK1.3 Question appears to match the KA. The part (2) distractor is not plausible. With Pressurizer Pressure offscale LOW at 1700 psig, it is unlikely a candidate would choose this distractor when the conditions given in the stem are for 1500 psig. One possible route to go would be query between RCS pressure stable or and some other diverse indication that the leak is isolated. Since you will reference the procedure in your question statement, the only correct answer will be RCS pressure.
														M HL18 WE04 EK2.01	S	JAT 3/14/2014 Second half of question changed. Question is now modified vice bank. Question appears to be okay. JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
(72) 17	H	2												M HL18 054AA 1.04 & HL17 WE05 EK2.1	S/E	W/E05 EA1.2 Question appears to match the KA. Need to verify that knowledge of the EOP bases for the major action category steps is RO knowledge (i.e., determining what constitutes adequate feed flow and adequate bleed flow). Also – the explanation of knowledge states that one PORV, even with head vents open, is not an adequate bleed path, and therefore a water source to a SG must be established. Consider, then, possibly using the word “delay” rather than “prevent” in the part (2) statement JAT 3/14/2014
															S	Question was revised to replace word ‘prevent’ with ‘delay.’ Also, Ops will make a statement stating that this piece of EOP bases knowledge is required of ROs. Question is okay. JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014
(73) 27	F	2												B	S	W/E08EK1.2 Question appears to match the KA. Question appears to be SAT. JAT 3/14/2014 Changed “steam rupture” to “steam line break.” JAT 4/2/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(74) 16	F	2										?		B	E/U	<p>W/E11 EG2.2.4 Replaced with EG2.1.25 on 10/3/2013</p> <p>Question appears to match the KA.</p> <p>The question as-is appears to require specific procedural knowledge for an RO, beyond knowing the major actions of the procedure. Recommend changing the question statement to a 2x2. One example could be: (the below is just an example – please feel free to modify as you see fit)</p> <p>“Per 19111-C, under current conditions, [1/0] containment spray pumps are required to be running, and having more than this number of CS pumps running [is/is not] allowed if their suctions are realigned to the Containment Sump.”</p> <p>Asking the question this way matches the KA (determining the required number of spray pumps using the reference) and prevents asking the RO a specific procedural direction question. The second part of the question allows the applicant to demonstrate whether or not they know the reason for the “Determine Containment Spray requirements” (to preserve RWST level). The answer to the second part of the question is not given away with the procedural steps on the provided reference – the applicant must know what “operate as required” means.</p> <p>JAT 3/14/2014</p>
															S	<p>Incorporated change recommended. Second question may not be plausible as written. First question meets KA, so licensee will rework second question and resubmit. JAT 4/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(75) 26	F	3												N	S	<p>W/E16EK2.2</p> <p>Question appears to match the KA.</p> <p>Question appears to be SAT. JAT 3/14/2014</p> <p>Question still appears to be okay. JAT 24/2/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(77) 82	H	2										X		M	U	<p>001AA2.04</p> <p>The question appears to meet the KA. The question does not appear to be at the SRO-only level. The trend of reactor power as a result of the inadvertent withdrawal meets the KA but is RO knowledge. The SRO-part of the question, regarding the stuck rod operability, does not meet the KA of relating continuous rod withdrawal to reactor power and its trend.</p> <p>To bring the question to the SRO-only level, I would recommend asking a procedures question.</p> <p>You do not need to tell the applicant that reactor power has risen – just tell them reactor power is now 75%.</p> <p>JAT 3/5/2014</p> <p>S</p> <p>Question revised. New questions appears to be SAT. Meets SRO-only criteria because they have to interpret counts and determine whether an EAL setpoint has been exceeded. JAT 3/31/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(76) 91	H	2												B Hatch 2011 NRC G2.1.37	S (pre)	<p>001G2.1.19</p> <p>Question appears to match the KA. Question appears to be at the SRO level. Question appears to be okay as-is.</p> <p>JAT 12/19/2013</p> <p>S</p> <p>Question is same as resubmitted presubmittal question. Question appears to meet the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/10/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(78) 86	F	2				X								N	E/U	<p>003G2.4.3</p> <p>The question appears to KA. Question appears to be at the SRO-only level.</p> <p>I'm not sure that the part (2) answer choices of "Thot" are plausible. While I understand that Thot is a diverse indication for something else in the same bases document, is there ever a time when Thot is used when Tcold is unavailable? If so, this would lend plausibility to this distractor.</p> <p>Otherwise, you may need to come up with a different distractor.</p> <p>JAT 3/5/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
															S	Question modified to an is/is not question to remove That from distractors. Question appears to be SAT. JAT 3/31/201 Final submitted question is SAT. JAT 4/25/2014
(79) 87	H			X		X								N	U/E (pre)	004G2.2.44 Question appears to match the KA. Question loosely appears to be at the SRO-only level. The similarity of the two names does lend some plausibility to the uncontrolled rod motion distractor. However, given that the basis for the uncontrolled rod motion is a trip (rather than an alarm), and given that the entire question is asking about boration, the second part of B and D do not appear plausible. Additionally, the first question appears to be LOD=1. The applicant is told in the stem that VCT pressure is slowly rising. The applicant does not need to know anything plant specific to determine that flow rate will lower. Recommend removing the bullet that states the VCT pressure and pressure trend. Given the first sentence of the "Explanation of Required Knowledge," the candidate should know that the HI/LO pressure alarm is for a high VCT pressure. However, the distractor for question (1) ("emergency boration flow will rise") will have more plausibility if they are not explicitly told VCT pressure is slowing rising. A better second question would question what procedures or sections of procedures the SS will go to, if possible. Although TS bases knowledge is SRO-only, this question overall would make more sense if the second part of the question (where the SRO-only part comes in) discusses what the SS will do (provided that can be done using more than just systems knowledge) – for example, if the result of the increase in VCT pressure is that the boration flowpath cannot be relied upon (step 6 of S.O.A. in 17007-1 for Window F05), are there other options the SS has that are explicitly procedurally directed? JAT 12/19/2013
															? (pre2)	The first part of the question is improved. However, I am having difficulty seeing the TS completion time connection to the second part of the question, and the way it's written, it appears as though the question can be answered solely by knowing what specific direction is contained within the ARP (which is likely not SRO-only, because it does not involve selection of procedures or sections of a procedure, nor does it require knowledge of >1h TS.). JAT 2/4/14

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	B/M/N	U/E/S	
														M	S	<p>New question submitted. Question appears to meet the KA. Question appears to be at the SRO-only level.</p> <p>One note – if someone were to select “initiate 18005-C,” they would still end up at the correct place because the first step directs tripping the reactor and initiating 19000-C. HOWEVER, since the question stem says “per 13003-1,” this choice would be incorrect, since it is not in accordance with 13003-1 (the actions are directed within 13003-1 itself).</p> <p>Question appears to be SAT. JAT 3/7/2014</p> <p>Changed answers to say “#1/#2” vs number one/number two. JAT 3/31/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(80) 88	H	2												B HL18 008 A2.02	S	<p>008A2.02</p> <p>Question appears to meet the KA. Question appears to be at the SRO-only level.</p> <p>Question appears to be SAT. JAT 3/7/2014</p> <p>OK JAT 3/31/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(81) 76	H	2												N	S	<p>008AG2.4.41</p> <p>Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/7/2014</p> <p>Modified the charging flow in the sentence to 122gpm to enhance plausibility of Alert distractor based on M. Donithan’s comments. JAT 3/31/2014.</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(82) 89	H	2												M	S	<p>022G2.1.19</p> <p>Question appears to match the KA. Question appears to be at the SRO-only level.</p> <p>Question appears to be SAT. JAT 3/7/2014</p> <p>No change. JAT 3/31/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(83) 77	H	2												N	S/E	<p>025AG2.4.30</p> <p>Question appears to match the KA. Question appears to be SRO-only. Explanation of required knowledge discusses RCS temperature rising >200F while in Mode 4 – should this be while in Mode 5?</p> <p>All part (2) answer choices contain “state and local authorities,” so what you are really querying on is whether the NRC must be notified within 15 minutes of the emergency declaration. Even though the words “as a minimum” are added to the question stem, since the NMP says “notification of the NRC shall be completed immediately following notifications to the state and county agencies,” I have some concern that if someone were to miss the question, they could argue that the NRC is required within the 15 minutes if the state and local agencies are notified in less than 15 minutes. It might be a good idea, then, to modify the second part of the question to ask:</p> <p>“Per NMP-EP-111, “Emergency Notifications,” the latest time the NRC is required to be notified of the declaration is [1200/1215]. “1215” would be correct answer, because the NRC must be notified within an hour of the declaration (rather than an hour of the actual emergency).</p> <p>Question appears to be SAT, but consider an enhancement to part (2). JAT 3/7/2014</p>
															S	<p>Suggested change was made. Question appears okay. JAT 3/31/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>
(84) 78	H	2												N	S/E	<p>026AA2.06</p> <p>Question appears to match the KA. Question appears to be at the SRO-only level.</p> <p>Is the total loss of ACCW criteria met at 1015 or 1016?</p> <p>Otherwise, question appears to be SAT. JAT 3/7/2014</p> <p>Slightly backwards way of meeting KA at SRO only level, but question appears okay. The first part of the stem was rewritten to toggle between the types of temperatures that will exceed limits, rather than time (but are still time-dependedent). JAT 3/31/2014</p>
															S	<p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(85) 83	H	2												N	S	028AG2.4.8 Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/6/2014 Question ok. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014
(86) 84	H	2											X	N	U	032AA2.03 Question appears to meet the KA. Question does not appear to be at the SRO-only level. The first part of the question is SRO-only but does not meet the KA. The second part of the question meets the KA, but not at the SRO-only level (systems knowledge). Recommend giving what the indication is in the stem of the question, and then asking a TS or procedures question as a result of that indication (i.e., what actions are required to be taken when one SR NI detector has its high voltage power supply breaker trip open). JAT 3/6/2014
															S	New question provided. New question appears to be SAT. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(87) 92	F	2				?								N	E (pre)	<p>033A2.03</p> <p>Question appears to match the KA. Question appears to be at the SRO-only level.</p> <p>Need to make sure that section 4.2.4 cannot be argued as a correct answer. The referenced procedure (13719-1 P&L 2.1.7, as well as a number of CAUTION statements) says "borated water sources should be used," rather than "shall" be used. If a technical source cannot be found that explicitly states that 4.2.2 is the one and only correct answer, a statement stating that the Operations expectation is that 4.2.2 is the only correct answer may be sufficient.</p> <p>Having Keff requirements as a basis for the SFP water level does not seem plausible. However, I think this can be solved by reframing the second question to state: "per the Bases of Tech Spec 3.7.15, 'Fuel Storage Pool Water Level,' maintaining the required minimum water level in the SFP _<does/does not>___ ensure adequate iodine decontamination factors are met for a fuel handling accident." It's not the most difficult question; however, the distractor is plausible.</p> <p>JAT 12/19/2013</p>
																<p>S (pre2)</p> <p>The new question incorporates the above suggestion, and the first concern with the original question has a learning objective to reinforce the use of borated water sources. Need to make sure this is definitive enough as a "technical source." JAT 2/4/2014</p>
																<p>S</p> <p>Question is same as resubmitted question. Question appears to meet the KA. Question appears to be SRO-only. Question appears to be SAT.</p> <p>JAT 3/6/2014</p> <p>Will get Operations Expectation for this question to reinforce the "Should" vs "Shall." JAT 3/31/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(88) 93	H	2											X	M	U	<p>055G2.4.42</p> <p>Question appears to meet the KA. However, question does not appear to meet the KA at the SRO-only level. Knowledge of the limit for primary to secondary leakage is above the line of TS 3.4.13 and therefore RO knowledge. Knowledge of the appropriate procedure navigation is SRO-only, but does not meet the KA of entry level conditions for TS.</p> <p>This is a difficult KA to meet at the SRO-only level. You could ask something from the bases, but it may be difficult to write a plausible distractor for something relating to primary to secondary leakage taken from the LCO 3.4.13 bases. Thus, if you would like to change KA's, I have randomly chosen KA 055G2.1.23 (Condenser Air Removal: Ability to perform specific system and integrated plant procedures during all modes of plant operation). (Actually, your existing question meets the new KA at the SRO level, but you have the option to ask a different question for this new KA should you choose to do so.)</p> <p>If you keep this question, you need to ensure that nothing in the Emergency Classification Matrix gives away the acceptable/unacceptable leakage for a SG Tube Leak (i.e., the reference provided for 008G2.4.41 or 025AG2.4.30).</p> <p>JAT 3/7/2014</p>
															S	<p>KA changed, but question did not. Question appears SAT. Nothing is given away in the matrix that would help with this question. JAT 3/31/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(89) 79	H	2											?	B HL15 NRC Q 058AA2 .03	E (pre)	<p>058AA2.03</p> <p>Question appears to match the KA. Not sure if the procedure question is at the SRO-only level. The second question is systems knowledge and not at the SRO-only level.</p> <p>Choices A-D have 4 different answers; the applicant does not need to know the answer to the second question to answer the question correctly.</p> <p>The explanation states that an automatic reactor trip has occurred, however, the justification for the correct answer is that the RNO step for "Verify Reactor Trip," states to initiate 19000-C. Does this mean that, although it occurred automatically, Reactor Trip cannot be verified?</p> <p>One possible fix could be dropping the second question (and anything in the stem that was solely used to answer the second question) and separate the first question to ask:</p> <p>"...the Shift Supervisor <is/is not> required to enter 18034-1 and the Shift Supervisor <is/is not> required to enter 19000-C."</p> <p>(I still need to think about whether asking it this way is at the SRO-only level. I'm leaning towards it IS at the SRO-only level.)</p> <p>JAT 12/19/2013</p>
															S (pre2)	<p>New question incorporates the above comments. SRO-only appears to be met because the question requires knowledge of procedure rules-of-usage. JAT 2/4/14</p>
															S	<p>Question is same as resubmitted presubmittal question. Question appears to meet the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/6/2014</p> <p>VG is going to rewrite plausibility statement. Question still appears ok. JAT 3/31/2014</p> <p>Final submitted question is SAT. JAT 4/25/2014</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(90) 80	H	2				X								B	U	<p>062AG2.2.12</p> <p>Question appears to meet the KA. Question appears to be SRO-only.</p> <p>Distractors A and B are not plausible because they have already elapsed given the conditions in the stem. The stem of the question puts the applicant at 1700 on 5/12/2014, and then asks when must the surveillance be performed (implies future performance) so as not to declare the LCO not met. If an applicant were to choose 0030 on 5/12 or 0630 on 5/12, the LCO would already not be met at the time of discovery. Since future performance was implied in the stem, these two distractors can be discounted.</p> <p>Also – I’m unclear on the plausibility of 0100 on 5-14-14: if the interval is 24 hours, 125% of this is 30 hours, and 24h + 125% is 54 hours. From the time it was last performed (0030 on 5/11), 24+125% = 0630 on 5/13. From the time of discovery (1700 on 5/12), 24+125%=2300 on 5/14. From the time of discovery (1700 on 5/12), 125%=2300 on 5/13. None of these are 0100 on 5/14...</p> <p>One option to fix the question is to ask:</p> <p>Which one of the following describes the status of the applicable LCO:</p> <p>A) The LCO was not met as of 0030 on 5-12-14. B) The LCO was not met as of 0630 on 5-12-14. C) The LCO is met provided the missed surveillance is performed satisfactorily no later than 1700 on 5-13-14. D) The LCO is met provided the missed surveillance is performed satisfactorily no later than 2300 on 5-13-14.</p> <p>JAT 3/5/2014</p> <p>S New question incorporates above suggestion. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014</p>
(91) 90	H	2												M	S	<p>076A2.02</p> <p>Question appears to match the KA. Question appears to be SRO-only.</p> <p>Part (1) appears to be RO knowledge. Part (2) appears to be SRO-only.</p> <p>Question appears to be SAT. JAT 3/7/2014</p> <p>Question is the same. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014</p>


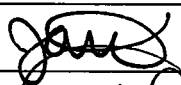
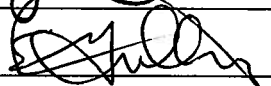
Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(92) 85	H	2												N	S	076AG2.4.47 Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/7/2014 M. Donithan brought up that this may not meet the KA. VG is going back to look at reworking the question to include a series of activities and times and asking when the first time the LCO was not met. Final submitted question is SAT. JAT 4/25/2014
(93) 94	F	2												N	S	G2.1.34 Question appears to match the KA. Question appears to be SRO-only. Part (1) is RO knowledge (above the line in TS). Part (2) requires bases knowledge of the reason for the limit and is therefore SRO-only. Question appears to be SAT. JAT 3/10/2014 Deleted the trailing zero in "0.10" and made it "0.1." JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014
(94) 95	F	2												B	S	G2.1.37 Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. 3/10/2014 Question is the same. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014
(95) 96	F	2												B HL 18 G2.2.20	S	G2.2.20 Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/10/2014 Question is the same. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014
(96) 97	F	2												B LOR 006 G2.2.39	S	G2.2.25 Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/10/2014 Question is the same. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
(97) 98	F	2												M	S	G2.3.4 Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/10/2014 Question is the same. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014
(98) 99	F	2												M	S	G2.3.7 Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/10/2014 Question is the same. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014
(99) 100	F	2												M	S	G2.4.46 Question appears to match the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/10/2014 Question is the same. JAT 3/31/2014 Final submitted question is SAT. JAT 4/25/2014
(100) 81	H	2												B HL15 WE11 EG2.4.2	S* (pre)	W/E11A2.02 Question appears to match the KA. Transitioning to the FRG's on an Orange path is not SRO-only knowledge. Knowledge of what to do when RWST reaches 8% may be SRO-only knowledge. Since the 8% RWST does not govern a procedure transition, please make sure this is required knowledge of the operators (i.e., not minutia). JAT 12/19/2013
															S	Question is same as presubmittal question. Question appears to meet the KA. Question appears to be SRO-only. Question appears to be SAT. JAT 3/10/2014 Final submitted question is SAT. JAT 4/25/2014

Final Sample Plan

The Vogtle 2014-301 Final Sample Plan is the Draft Sample Plan combined with the ES-401-4 (Record of Rejected KAs).

ES 403-1

Facility: <u>Vogtle</u>		Date of Exam: <u>5/29/14</u>		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	<u>Ag</u>	<u>N/A</u>	<u>JAD</u>	
2.	Answer key changes and question deletions justified and documented	<u>Ag</u>	<u>N/A</u>	<u>JAD</u>	
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<u>Ag</u>	<u>N/A</u>	<u>JAD</u>	
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	<u>Ag</u>	<u>N/A</u>	<u>JAD</u>	
5.	All other failing examinations checked to ensure that grades are justified	<u>Ag</u>	<u>N/A</u>	<u>JAD</u>	
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	<u>Ag</u>	<u>N/A</u>	<u>JAD</u>	
Printed Name/Signature		Date			
a. Grader	<u>A. Goldau</u> 	<u>6-11-14</u>			
b. Facility Reviewer(*)	<u>N/A</u>	<u>N/A</u>			
c. NRC Chief Examiner (*)	<u>J.A. Toth</u> 	<u>6/12/14</u>			
d. NRC Supervisor (*)	<u>E. GUTHRIE</u> 	<u>6/25/14</u>			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					