ES-201	Examination Preparation Checklist	Form ES-201-1

Facility: Vogtle (Unit 3) Date of Examination: 2/27/2017

Developed by: Written: Facility ☑ NRC ☐ // Operating Facility ☑ NRC ☐

Target Date*		Task Description (Reference)	Chief Examiner's Initials
-180	1.	Examination administration date confirmed (C.1.a; C.2.a and b)	
-150	2.	NRC examiners and facility contact assigned (C.1.d; C.2.e)	
-150	3.	Facility contact briefed on security and other requirements (C.2.c)	
-150	4.	Corporate notification letter sent (C.2.d)	
[-120]	5.	Reference material due (C.1.e; C.3.c; Attachment 3)	N/A
{-90}	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, ES-401-1/2, ES-401N-1/2, ES-401-3, ES-401N-3, ES-401-4, and ES-401N-4, as applicable (C.1.e and f; C.3.d)	
{-85}	7.	Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	
{-60}	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, ES-401N-6, and any Form ES-201-2, ES-201-3, ES-301-1, or ES-301-2 updates), and reference materials due (C.1.e, f, g and h; C.3.d)	
-45	9.	Written exam and operating test reviews completed. (C.3.f)	
-30	10.	Preliminary license applications (NRC Form 398's) due (C.1.l; C.2.g; ES-202)	
-21	11.	Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	
-21	12.	Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	
-14	13.	Final license applications due and Form ES-201-4 prepared (C.1.l; C.2.i; ES-202)	
-14	14.	Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	
-7	15.	Facility licensee management queried regarding the licensee's views on the examination. (C.2 j)	
-7	16.	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 5; ES-202, C.2.e; ES-204)	
-7	17.	Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	
-7	18.	Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.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.

* Written Exam Only *

ES-201 **Examination Outline Quality Checklist** **Form ES-201-2**

Facility: Vogtle AP-1000 Date of Examination: ~~Oct~~ Feb 2017

Item	Task Description	Initials a	Initials b*	Initials c#
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401 or ES-401N.		N/A	
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 or ES-401N and whether all K/A categories are appropriately sampled.		N/A	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.		N/A	
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.		N/A	
2. SIMULATOR	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.			
	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.	N		
3. WALK THROUGH	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.			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. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.		N/A	
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.		N/A	
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.		N/A	
	d. Check for duplication and overlap among exam sections.	N/A	N/A	N/A
	e. Check the entire exam for balance of coverage.		N/A	
	f. Assess whether the exam fits the appropriate job level (RO or SRO).		N/A	

	Printed Name/Signature	Date
a. Author	Phillip G. Copeland /	1/11/16
b. Facility Reviewer (*)	N/A	N/A
c. NRC Chief Examiner (#)	Daniel M. Bacon /	1/11/16
d. NRC Supervisor	Eugene Guthrie /	1/11/16

Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.
* Not applicable for NRC-prepared examination outlines.

* Written Exam Only *

Facility: Vogtle AP-1000 Date of Examination: 27 February 2017

Item	Task Description	Initials a	Initials b*	Initials c#
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401 or ES-401N.			
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 or ES-401N and whether all K/A categories are appropriately sampled.		N	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.			A
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.			
2. SIMULATOR	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.	D	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.	D	A	
	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.	D	A	
3. WALK THROUGH	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.	D	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	D	A	
	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.	D	A	
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	D	A	
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	D	A	
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	D	A	
	d. Check for duplication and overlap among exam sections.	D	A	
	e. Check the entire exam for balance of coverage.	D	A	
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	D	A	

	Printed Name/Signature	Date
a. Author	Benjamin Hardinger /	12/13/2016
b. Facility Reviewer (*)	Chuck Howard /	10/18/2016
c. NRC Chief Examiner (#)	Daniel M. Bacon /	11/14/2016
d. NRC Supervisor	Eugene F Guthrie /	11/21/2016

Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.
* Not applicable for NRC-prepared examination outlines.

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 17 OCT 2016 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 03/07/2017 - 03/15/2017. 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.	Chuck Howard	Vogtle 3/4 Exam Lead		12/30/15		3/15/17	
2.	Benjamin E. Denlinger	Vogtle 3/4 Exam Author		3/20/16		3/15/17	
3.	James Dugas	Vogtle 3/4 Exam Author		3/20/16		3/15/17	
4.	Andrew T. Nichols	Vogtle 3/4 Exam Author		03/20/16		3/15/17	
5.	Dennis Spielman	Vogtle 3/4 Sim Coordinator		3/25/16		3/16/17	
6.	Anwar Ferguson	Vogtle 3/4 Sim Specialist		4/21/16		3/16/2017	
7.	Ken Jenkins	Vogtle 1/2 Exam Lead		4/28/16		3/16/17	
8.	Raymond Patterson	Vogtle 3/4 OIS Instructor		4/28/16		3/21/17	
9.	Sahray Gambaro-Peraza	Vogtle 3/4 Sim Engineer		5/4/16		3/21/17	2
10.	Elena Fromer	Vogtle 3/4 Sim Engineer		6/23/16		3/22/17	
11.	Tammie Sweat	Site Simulator OPS Training Rep IT		8/8/16		3/16/17	
12.	Santonio Lee			8/11/16		3/21/17	
13.	Rogerk Bragg	Sim Booth Operator		11/30/17		3/21/17	1
14.	W. Barry Evans	V3/4 Sim Booth Operator		1/30/17		3/31/17	1
15.	BERNARD BURGESS	V3&4 INSTRUCTOR		2/21/17		3/16/17	

NOTES:

1) Signed off per E-mail communication

2) Signed off per Telephone communication

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 17 OCT 2016 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 02/27/2017 - 03/15/2017. 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.	JE White	V34 OPS Instructor		2-23-17		3-16-17	
2.	David Hawkins	V34 OPS Instructor		2.23.17		3/14/17	
3.	DERRICK TRAFFORD	V3/4 Shift Support Supervisor		2/23/2017		3/16/17	
4.	Heather Thompson	V3/4 Instructor		2/24/17		3/20/17	
5.	Roxanne Moon	V3/4 Admin		2/24		3/16/17	
6.	Liz Walker	V3/4 Admin		2/24/17		3/20/17	
7.	Sharon Zipperer	V34 Admin		2/24/17		3-16-17	
8.	Dan Miller	V34 Training		2/24/17		3/16/17	
9.	COLT RAUSCHENBERG	V34 OPS INSTRUCTOR		2/24/17		3/16/17	
10.	JEFFREY SOLLARS	V34 OPS INSTR		2/24/17		3/16/17	
11.	JEFFREY BAIER	V34 OPS INSTRUCTOR		2-24-17		3-16-17	
12.	Eric Bussick	V34 OPS INSTRUCTOR		2/24/17		3/16/17	
13.	JASON NELSON	V34 OPS INSTRUCTOR		2/24/17		3/20/17	
14.	Eric Lee	V34 Shift Support Supervisor		2/24/17		3/16/17	
15.	JOHN UMPHLETT	V34 LEAD OP INSTRUCTOR		2/27/17		3/16/17	

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 17 OCT 2016 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 03/27/2017 - 23/15/2017. 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.	Brian Hooks	NPO		8/16/16		3/16/17	
2.	Claude Wilson	NPO		8/16/16		3/16/17	
3.	Daryl Downey	Shift Support Supv.		8/16/16		3/16/17	
4.	Taylor Joseph	Shift Manager		8/16/16		3/20/17	
5.	DAN RAMIREZ	SSS		9/6/16		3/16/17	
6.	James Branch	SSS		9/6/16		3/16/17	
7.	MATT ELEY	NPO		9/6/16		3/16/17	
8.	Jeff Pope	NPO		9/6/16		3/16/17	
9.	MARK LORENZI	SSS		10/17/16		3/21/17	1
10.	SEAN RICHARDSON	SSS		10/17/16		3/20/17	
11.	JERRY WOOD	NPO		17OCT2016		16MAR2017	
12.	Robert Rowland	SS		10/17/16		3/21/17	1
13.							
14.							
15.							

NOTES:

1) Signed off per E-mail communication

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

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 17 OCT 2016 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 02/27/2017 - 03/05/2017. 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.	RALPH PRITCHARD	OPS PEER / SEQUESTERER		24 FEB 2017		3/16/17	
2.	MARK HAYDEN	OPS TRAINING / SEQUESTERER		24 FEB 2017		3/16/17	
3.	[illegible]	OPS [illegible]		24 FEB 2017		3/16/17	
4.	EVAN PHILLIPS	OPS INSTRUCTOR / SEQUESTERER		24 FEB 2017		3/16/17	
5.	SCOT BRADY	OPS INSTRUCTOR/SEQUESTER		24 FEB 17		3/31/17	1
6.	Vedrana Cheeley	Sr Secretary		2-27-17		3-16-17	
7.	Jason Kearley	Ops Instructor / STA		2/27/17		3/16/17	
8.	B. Scott Pearcy	Ops Instructor / SEQUESTERER		2/27/17		3/16/17	
9.	JEROME J. ZAKRZEWSKI	Ops Instructor / Sequester		2/27/17		3/16/17	
10.	HANNAH E. MYERS	Ops Instructor / Communications		3/2/17		3/31/17	1
11.							
12.							
13.							
14.							
15.							

NOTES:

1) Signed off per E-mail communication

Vogtle -17 Class C NRC Exam

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

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 17 OCT 2016 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 03/07/2017 - 03/15/2017. 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.	Gary Olmstede	Fleet Exam Manager		4/25/2016		3/20/17	
2.	Scott DePrest	Exam Reviewer	Scott DePrest	8/1/2016		3/21/17	1
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NOTES:

1) Signed off per E-mail communication

1. **Pre-Examination**

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 17 OCT 2016 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 03/27/2017 - 03/15/2017. 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.	Matthew Schmaglen	Exelon OPTS Training Manager		6/13/16		3/16/17	
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NOTES:

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

1. **Pre-Examination**

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 17 OCT 2016 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 03/27/2017 - 05/05/2017. 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.	Colin Housea l	SCANA SRO OPS		21/10/17		3-17-17	1
2.	Ryan Cardinal	SCANA SRO OPS		21/10/17		3-17-17	1
3.	Curtis Isbat	SCANA SEO OPS		1/10/17		3-17-17	1
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NOTES:

1) Signed off per E-MAIL Communication (ATTACHED)

Facility: Vogtle Unit 3 Date of Examination: 02/27/2017 Operating Test Number:

	1. General Criteria	Initials a	b*	c#
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).			
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.			
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)			
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.			
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			
	2. Walk-Through Criteria	--	--	--
a.	Each JPM includes the following, as applicable: • initial conditions • initiating cues • references and tools, including associated procedures • reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee • operationally important specific performance criteria that include: – detailed expected actions with exact criteria and nomenclature – system response and other examiner cues – statements describing important observations to be made by the applicant – criteria for successful completion of the task – identification of critical steps and their associated performance standards – restrictions on the sequence of steps, if applicable			
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.			
	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.				

		Printed Name / Signature	Date
a.	Author	ANDREW T. NICHOLS	12/27/2016
b.	Facility Reviewer(*)	CHUCK HOWARD	12/27/2016
c.	NRC Chief Examiner (#)	Daniel M. Bacon / Daniel M Bacon	2/13/2017
d.	NRC Supervisor	Eugene Guthrie / EGuthrie	2/16/2017

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

Facility: Vogtle Unit 3 Date of Exam: 02/27/2017 Scenario Numbers: 1 / 2 / 3 / 4 Operating Test No.:

QUALITATIVE ATTRIBUTES	Initials a	Initials b*	Initials c#
1. The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.			
2. The scenarios consist mostly of related events.			
3. Each event description consists of • the point in the scenario when it is to be initiated • the malfunction(s) or conditions that are entered to initiate the event • the symptoms/cues that will be visible to the crew • the expected operator actions (by shift position) • the event termination point (if applicable)			
4. The events are valid with regard to physics and thermodynamics.			
5. Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
6. 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.			
7. The simulator modeling is not altered.			
8. 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.			
9. 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.			
10. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			
11. The scenario set provides the opportunity for each applicant to be evaluated in each of the applicable rating factors. (Competency Rating factors as described on forms ES-303-1 and ES-303-3.)			
12. Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).			
13. The level of difficulty is appropriate to support licensing decisions for each crew position.			

Target Quantitative Attributes (Per Scenario; See Section D.5.d)	Actual Attributes	--	--	--
1. Malfunctions after EOP entry (1-2)	3 / 4 / 3 / 3			
2. Abnormal events (2-4)	4 / 4 / 5 / 3			
3. Major transients (1–2)	1 / 1 / 1 / 1			
4. EOPs entered/requiring substantive actions (1–2)	1 / 1 / 1 / 1			
5. EOP contingencies requiring substantive actions (0-2)	1 / 1 / 0 / 1			
6. EOP based Critical tasks (2–3)	2 / 2 / 2 / 2			

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

Facility: Vogtle Unit 3 Date of Exam: March 2017 Operating Test No.: ILT-2

APPLICANT	EVENT TYPE	Scenarios												TOTAL	MINIMUM(*)		
		1			2			3			4						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP		R	I	U
RO ☐ SRO-I ☒ SRO-U ☐	RX	1			3 5			5			1			5	1	1	0
	NOR	0			6			3			1 4			4	1	1	1
	I/C	1 2 3 5 7 8 9			1 2 3 4 8 9 10 11			1 2 4 6 8 9 10			3 5 6 8 9 10			28	4	4	2
	MAJ	6			7			7			7			4	2	2	1
	TS	1 4			2 5			3 5			2 6			8	0	2	2
RO ☒ SRO-I ☒ SRO-U ☐	RX		1			3			0			1		3	1	1	0
	NOR		0			0			0			4		1	1	1	1
	I/C		3 7 8			4 8 9 10			1 8 9 10			6 8 9		14	4	4	2
	MAJ		6			7			7			7		4	2	2	1
	TS		0			0			0			0		0	0	2	2
RO ☒ SRO-I ☒ SRO-U ☐	RX			0			5			5			0	2	1	1	0
	NOR			0			6			3			1	3	1	1	1
	I/C			1 2 5 9			1 2 3 11			2 4 6			3 5 10	14	4	4	2
	MAJ			6			7			7			7	4	2	2	1
	TS			0			0			0			0	0	0	2	2

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls" (ATC) and "balance-of-plant" (BOP) positions. Instant SROs (SRO-I) 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 SRO-I *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.

2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a one-for-one basis.

3. Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirements specified for the applicant's license level in the right-hand columns.

4. For licensees that use the ATC operator primarily for monitoring plant parameters, the chief examiner may place SRO-I applicants in either the ATC or BOP position to best evaluate the SRO-I in manipulating plant controls.

Facility: Vogtle Unit 3 Date of Examination: March 2017 Operating Test No.:

	APPLICANTS															
	RO ☐ *SRO-I* ☒ SRO-U ☐				*RO/ATC* ☒ *SRO-I* ☒ SRO-U ☐				*RO/BOP* ☒ *SRO-I* ☒ SRO-U ☐				RO ☐ SRO-I ☐ SRO-U ☐			
Competencies	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	1-9	1-11	1-10	1-10	1, 3, 6-8	3, 4, 7-10	1,7-10	1,4, 6-9	1, 2, 5, 6, 9	1-3, 5-7, 11	2-7	1, 3, 5, 7, 10				
Comply With and Use Procedures (1)	1-9	1-11	1-10	1-10	1, 3, 6-8	3, 4, 7-10	1,7-10	1,4, 6-9	1, 2, 5, 6, 9	1-3, 5-7, 11	2-7	1, 3, 5, 7, 10				
Operate Control Boards (2)	1-9	1-11	1-10	1-10	1, 3, 6-8	3, 4, 7-10	1,7-10	1,4, 6-9	1, 2, 5, 6, 9	1-3, 5-7, 11	2-7	1, 3, 5, 7, 10				
Communicate and Interact	1-9	1-11	1-10	1-10	1, 3, 6-8	3, 4, 7-10	1,7-10	1,4, 6-9	1, 2, 5, 6, 9	1-3, 5-7, 11	2-7	1, 3, 5, 7, 10				
Demonstrate Supervisory Ability (3)	1-9	1-11	1-10	1-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				
Comply With and Use Tech. Specs. (3)	1, 4	2, 5	3, 5	2, 6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A				

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. (This includes all rating factors for each competency.) (Competency Rating factors as described on forms ES-303-1 and ES-303-3

(Note: Based on the scenarios chosen and the crew makeup, ATC and BOP (UO) positions will be filled by RO or SRO-I candidates. Form completed for control room positions NOT individual candidates.)

Facility: Vogtle Date of Exam: ~~October 2016~~ February 2017

Tier	Group	RO K/A Category Points											SRO-Only Points		
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G* / Total	A2	G*	Total
1. Emergency & Abnormal Plant Evolutions	1	3	3	3	N/A			2	3	N/A		3 / 18	3	3	6
	2	2	1	2				1	2			1 / 9	2	2	4
	Tier Totals	5	4	5				3	5			4 / 27	5	5	10
2. Plant Systems	1	3	3	2	~~3~~ 2	~~2~~ 1	3	3	2	2	3	2 / 28	2	3	5
	2	1	1	1	1	1	1	1	0	1	1	1 / 10	1	2	3
	Tier Totals	4	4	3	~~4~~ 3	~~3~~ 2	4	4	2	3	4	3 / 38		5	8
3. Generic Knowledge and Abilities Categories		1			2			3			4	10	1	2	3	4	7
		2			3			2			3		1	2	2	2	

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

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
A-301AA2.02	Rapid Power Reduction	3	3.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Reactor Coolant System boron addition volume and rate
A-313AA1.03	Uncontrolled Cooldown	3.5		☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	SG PORVs
A-323AK1.08	Loss of 6.9KV, 4160 Volt, or 480 Volt Bus Power	3.2		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Main Control Room Emergency Habitability System
A-336AG2.1.14	Malfunction of Protection and Safety Monitoring System	4	3.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to use integrated control systems to operate plant systems or components.
A-337AK3.06	Passive Residual Heat Removal Heat Exchanger Leak	2.7		☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Trending Passive Residual Heat Removal System inlet temperatures and pressures
A-342AG2.4.36	Reactor Coolant Pump Malfunctions	4.1	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to prioritize and interpret the significance of each annunciator or alarm.
A-343AK2.02	Loss of Normal Residual Heat Removal	3.5		☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Transferring Reactor Coolant System heat load to the Passive Residual Heat Removal System heat exchanger
E-1EK1.01	Loss of Reactor or Secondary Coolant	4.3		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Automatic Depressurization System
E-2EK3.04	Faulted Steam Generator Isolation	3.4		☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Checking Passive Residual Heat Removal System is available prior to isolating the startup feedwater lines to the faulted steam generators
ECA-1.1EA1.02	Loss of Coolant Accident Outside Containment	3.6		☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Diverse Actuation System
ES-0.1EK2.10	Reactor Trip Response	3.3		☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Inability to stabilize Reactor Coolant System at no load Tcold temperature

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
ES-1.1EK1.12	Passive Safety System Termination	2.8		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Pressurizer Pressure Control System
ES-1.3EA1.14	ADS Stage 1-3 Actuation Response	3.6	0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	ADS Stage 4
ES-1.4EA2.01	ADS Stage 4 Actuation Response	3.6	3.8	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	ADS Stage 4 proper alignment
FR-C.1EG2.4.1	Response to Inadequate Core Cooling	4.6	4.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of Emergency/Abnormal Operating Procedure entry conditions.
FR-H.1EK3.14	Response to Loss of Heat Sink	4.4		☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Automatic Depressurization System Actuation
FR-S.1EK2.03	Response to Nuclear Power Generation – ATWS	4.1		☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Failure to recognize the need and failure to manually trip the reactor through the Protection and Safety Monitoring System, given anticipated transient without scram (PRA related)
SDP-1EA2.03	Response to Loss of RCS Inventory During Shutdown	3.6	3.6	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Core exit temperature

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
A-304AK2.08	Steam Generator Tube Leak	3.2		☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Using Passive Residual Heat Removal System for Reactor Coolant System cooldown
A-311AK3.02	Rod Control System Malfunctions	3.3		☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Checking On-line Power Distribution Monitoring System is operable
A-320AK1.09	Loss of Circulating Water	2.6		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Circulating Water trash screens
A-327AA2.01	Startup Feedwater System Malfunctions	2.8	3.5	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Steam generator level
A-328AK1.03	Malfunction of Feedwater Heaters and Extraction Steam	2.6		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Main and Startup Feedwater System
A-333AA1.01	Main Turbine Malfunctions	3.4		☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Main turbine load and trip controls
FR-Z.1EK3.06	Response to High Containment Pressure	3.4		☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Main Steam Isolation Actuation
FR-Z.2EG2.4.25	Response to Containment Flooding	3.6	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of operator response to a loss of all annunciators.
FR-Z.4EA2.01	Low Containment Pressure	2.8	3	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Containment pressure

KA	NAME / SAFETY FUNCTION	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
ADSA4.04	Automatic Depressurization System	4.1		☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Reactor Cooling System pressure
ADSK6.01	Automatic Depressurization System	4.2		☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Diverse Actuation System
CASA1.01	Compressed Air System	2.6		☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Instrument air compressor package parameters
CCSK4.02	Component Cooling Water System	3		☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Normal Reactor Coolant System cooldown
CNSK1.20	Containment System	3.3		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Steam Generator System
CNSK3.01	Containment System	4		☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Containment integrity
CVSK2.04	Chemical and Volume Control System	3.7		☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Containment isolation valves
DASA2.05	Diverse Actuation System	3.4	3.3	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Containment isolation
ECSG2.2.17	AC Electrical Distribution Systems	4	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of limiting conditions for operations and safety limits.
ESASK6.23	Engineered Safeguards Actuation System	3.6		☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	P-12, Pressurizer Level
FWSA4.05	Main and Startup Feedwater System	3.3		☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Main feedwater control valve

KA	NAME / SAFETY FUNCTION	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
IDSK2.09	Class 1E and Non 1E DC and UPS Systems	2.5		☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Non class 1E instrument bus inverters (OE-related)
IDSK4.06	Class 1E and Non 1E DC and UPS Systems	2.6		☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	System ground detection
MSSA3.05	Main Steam System	3.5		☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Steam Line Isolation Actuation
PCSA2.13	Passive Containment Cooling System	3.8	4.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Loss of coolant accident
PCS~~K5.03~~ K4.04	Passive Containment Cooling System	~~2.5~~ 2.8		☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	~~Heat transfer via radiation~~ Fire protection water supply
PPCSG2.4.39	Pressurizer Pressure Control System	4.2	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to verify system alarm setpoints and operate controls identified in the Alarm Response Procedure.
PRHRA1.03	Passive Residual Heat Removal System	3.5		☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Passive Residual Heat Removal System heat exchanger temperature
PXSK3.02	Passive Core Cooling System	3.2		☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Normal Residual Heat Removal System
RCPK5.04	Reactor Coolant Pump System	3.2		☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Reactor coolant pump start effect on reactivity/boron (OE-related)
RCSA1.17	Reactor Coolant System	3.9		☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Reactor Coolant System Automatic Depressurization System discharge temperature
RCSK1.18	Reactor Coolant System	3.6		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Normal Residual Heat Removal System

KA	NAME / SAFETY FUNCTION	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
RNSA4.07	Normal Residual Heat Removal System	3.5		☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Post loss of coolant accident containment makeup
RNSK6.04	Normal Residual Heat Removal System	2.7		☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Pump flow rate instrument
RTSK2.02	Reactor Trip System	3.6		☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Reactor Trip System Instrumentation
SGSK5.14	Steam Generator System	2.6		☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Chemistry and corrosion control
SWSK1.03	Service Water System	2.7		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Circulating Water System
ZOSA3.01	Onsite Standby Power System	3.2		☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Standby Diesel Generator starting and loading

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
CDSK4.07	Condensate System	2.6		☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Feedwater heater automatic isolation and bypass
DRCSG2.2.28	Digital Rod Control System	3.9	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to recognize system parameters that are entry-level conditions for Technical Specifications.
FHSK5.06	Fuel Handling System	2.7	3.0	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Loss of Containment Air Filtration System
IISK~~1.07~~ 1.05	Incore Instrumentation System	~~2.5~~ 3.4		☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	~~Special Monitoring System~~ Protection and Safety Monitoring System
NISA3.03	Nuclear Instrumentation System	3.6		☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	P-17, Negative Flux Rate Alert
PLCSA1.08	Pressurizer Level Control System	3.1		☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Code safety tailpipe temperature
RMSK2.01	Radiation Monitoring System	3.1		☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Radiation monitors that provide Engineered Safeguards Actuation System Actuations
VFSK6.01	Containment Air Filtration System	2.5		☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Compressed Air System
VLSA4.02	Containment Hydrogen Control System	3.6		☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Containment hydrogen igniter
WGSK3.01	Gaseous Radwaste System	2.6		☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Plant Gas Systems

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G.2.3.9	Radiation Control	2.9	3.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation monitoring systems, such as fixed radiation monitors and alarms, or personnel monitoring equipment.
G2.1.5	Conduct of operations	2.9	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to use procedures related to shift staffing, such as minimum crew complement, or overtime limitations.
G2.1.8	Conduct of operations	3.4	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to coordinate personnel activities outside the control room.
G2.2.15	Equipment Control	2.6	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the process for managing troubleshooting activities.
~~G2.2.22~~ G2.2.28	Equipment Control	3.9	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	~~Ability to determine operability or availability of safety related equipment~~ Ability to recognize system parameters that are entry level conditions for Technical Specifications
G2.2.24	Equipment Control	3.9	4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of less than or equal to one hour Technical Specification action statements. (This K/A does not include Action Statements of one hour or less that follow the expiration of a completion time for a Technical Specification condition for which an A
G2.3.4	Radiation Control	3.5	3.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to comply with radiation work permit requirements during normal or abnormal conditions.
G2.4.16	Emergency Procedures/Plans	4	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the parameters and logic used to assess the status of Emergency Operating Procedures Critical Safety Functions or Shutdown Critical Safety Functions.
G2.4.38	Emergency Procedures/Plans	4.2	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material
G2.4.8	Emergency Procedures/Plans	3.8	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of low power/shutdown implications in accident (e.g., loss of coolant accident or loss of residual heat removal) mitigation strategies.

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
A-323AG2.2.21	Loss of 6.9KV, 4160 Volt, or 480 Volt Bus Power	3.1	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions for operations.
A-329AG2.1.14	Loss of Instrument Air	4	3.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to use integrated control systems to operate plant systems or components.
A-336AA2.02	Malfunction of Protection and Safety Monitoring System	4	3.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Diverse Actuation System indications
E-1EA2.04	Loss of Reactor or Secondary Coolant	3.4	3.4	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Passive Residual Heat Removal System flow
FR-C.1EG2.2.19	Response to Inadequate Core Cooling	0	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.
FR-H.1EA2.02	Response to Loss of Heat Sink	3.8	3.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Reactor Coolant System pressure and/or temperature

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
A-308AA2.02	Loss of Control Room Air Conditioning	2.3	2.8	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Nuclear Island Nonradioactive Ventilation System flow
A-318AG2.2.22	Condensate System Malfunctions	0	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to determine operability or availability of safety related equipment.
ES-1.2EA2.07	Post Loss of Coolant Accident Cool Down and Depressurization	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Containment pressure
FR-C.3~~EG2.4.14~~ G2.4.28	Response to Saturated Core Cooling	~~3.4~~ 3.0	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	~~Knowledge of Emergency/Abnormal Operating Procedures layout, symbols, and icons.~~ a Knowledge of the lines of authority during implementation of the Emergency Plan Implementing Procedures

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
CASA2.06	Compressed Air System	3	2.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Loss of instrument air supply pressure
CNSA2.03	Containment System	3.7	3.6	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Normal Residual Heat Removal System containment isolation
ESASG2.4.3	Engineered Safeguards Actuation System	3.7	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to identify post-accident instrumentation.
FWSG2.1.21	Main and Startup Feedwater System	4.3	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to perform general and/or normal operating procedures during any plant condition.
RTS~~G2.4.10~~ G2.4.7	Reactor Trip System	~~4.6~~ 3.8	~~4.6~~ 4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	~~Knowledge of Emergency/Abnormal Operating Procedure entry conditions~~ Knowledge of how Abnormal Operating Procedures are used in conjunction with Emergency Operating Procedures

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
FPSG2.4.39	Fire Protection System	4.2	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to verify system alarm setpoints and operate controls identified in the Alarm Response Procedure.
SDCSA2.08	Steam Dump Control System	2.7	2.9	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Main steam header pressure
VESG2.4.24	Main Control Room HVAC	4.2	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of annunciator alarms, indications, or response procedures.

KA	NAME / SAFETY FUNCTIO	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
~~G.2.3.9~~ G-2.3.3	Radiation Control	~~2.9~~ 2.0	~~3.1~~ 3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	~~Knowledge of radiation monitoring systems, such as fixed radiation monitors and alarms, or personnel monitoring equipment~~ Ability to approve liquid or gaseous release permits
G2.1.30	Conduct of operations		3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the fuel-handling responsibilities of SROs.
G2.2.11	Equipment Control	3.9	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to determine the expected plant configuration using design and configuration control documentation, such as drawings, line-ups, or tag-outs.
G2.2.27	Equipment Control	3.5	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to obtain and/or interpret station electrical and mechanical drawings.
G2.3.5	Radiation Control	3.8	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to control radiation releases.
G2.4.39	Emergency Procedures/Plans	4.2	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to verify system alarm setpoints and operate controls identified in the Alarm Response Procedure.
G2.4.6	Emergency Procedures/Plans	3.7	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of Emergency/Abnormal Operating Procedures major action categories.

Facility: Vogtle Unit 3 Date of Exam: 3/15/2017 Exam Level: RO ✓ SRO ✓

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

	Printed Name/Signature	Date
a. Grader	Jason D. Bunor	04/06/2017
b. Facility Reviewer(*)	N/A	
c. NRC Chief Examiner (*)	Daniel M. Bacon Daniel M. Bacon	04/06/2017
d. NRC Supervisor (*)	Eugene Guthrie / E Guthrie	4/13/17

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

Southern Nuclear

John G. Austin, III
Training Director
Plant Vogtle 3&4

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October 18, 2016

ND-16-2222

U.S. Nuclear Regulatory Commission, Region II
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257

VOGTLE ELECTRIC GENERATING PLANT UNITS 3&4
NRC OPERATING EXAMINATION OUTLINES

Dear Mr. Bacon,

Attached please find the Vogtle 3 & 4 Operating Examination outline submittal and supporting documentation. The examination is being administered beginning the week of February 27, 2017. This examination package is being submitted in accordance with NUREG-1021, Revision 10. Reference materials have been submitted separately. The examination materials submitted must be withheld from public disclosure until after the examinations are complete.

Specific items provided include:

- ES-201-2 (Examination Outline Quality Checklist)
- ES-201-3 (Examination Security Agreement)
- ES-301-1 (Administrative Topics Outline)
- ES-301-2 (Control Room/In-Plant Systems Outline)
- ES-301-5 (Transient and Event Checklist)
- ES-D-1 (Scenario Outline)
- ES-401N-4 (Record of Rejected K/As)

If you have any questions, please contact Chuck Howard at 706-848-7869.

Sincerely,

Chuck Howard
Lead Instructor – Exam Development
Vogtle 3&4

Southern Nuclear

John G. Austin, III
Training Director
Plant Vogtle 3&4

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December 27, 2016

ND-16-2643

U.S. Nuclear Regulatory Commission, Region II
Marquis One Tower
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257

ATTN: Mr. Bacon

VOGTLE ELECTRIC GENERATING PLANT UNITS 3&4
NRC OPERATING AND WRITTEN EXAMINATIONS

Dear Mr. Bacon,

Provided by secure transmittal via FTP site please find the Vogtle 3 & 4 Operating and Written Examinations and supporting documentation. The examination is being administered beginning the week of February 27, 2017. This exam package is being submitted in accordance with NUREG-1021 Revision 10. The exam materials contained in this transmittal MUST be withheld from public disclosure until after the examinations are complete.

Specific items provided include:

- ES-201-2 (Examination Outline Quality Checklist)
- ES-201-3 (Examination Security Agreement)
- ES-301-1 (Administrative Topics Outline)
- ES-301-2 (Control Room/In-Plant Systems Outline)
- ES-301-3 (Operating Test Quality Checklist)
- ES-301-4 (Simulator Scenario Quality Checklist)
- ES-301-5 (Transient and Event Checklist)
- ES-301-6 (Competencies Checklist)
- ES-D-1 (Scenario Outline)
- ES-D-2 (Required Operator Actions)
- ES-401N-6 (Written Exam Quality Checklist)
- ES-401N-4 (Record of Rejected K/As)

If you have any questions, please contact Chuck Howard at 706-848-7869.

Sincerely,

Chuck Howard
Lead Instructor – Exam Development
Vogtle 3&4

Southern Nuclear

Karen D. Fili
Site Vice President, Vogtle 3&4

7825 River Road
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kdfili@southernco.com

March 21, 2017

ND-17-0471

U.S. Nuclear Regulatory Commission, Region II
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257,

ATTN: Mr. Daniel Bacon

VOGTLE ELECTRIC GENERATING PLANT UNITS 3&4
POST EXAMINATION PACKAGE

Dear Mr. Bacon,

Attached please find the Vogtle 3 & 4 RO/SRO Initial License Exam Post Examination material and supporting documentation. The operating test was administered during the weeks of February 27 and March 6, 2017, and the written exam was administered on March 15, 2017. This post-exam package is being submitted in accordance with NUREG-1021, Revision 10, Section ES-501 (Initial Post-Examination Activities).

Specific items provided include:

- ES-201-3 (Examination Security Agreement)
- ES-401N-7 and ES-401N-8 (Site Specific RO/SRO Written Examination Cover Sheets)
- Each applicant's original answer sheet
- One copy of each applicant's original answer sheet
- Master written examination with answer key, annotated with changes made while administering the exam
- Written examination performance analysis
- Questions asked by the candidates during the exam, with responses
- Condition reports written for procedure revision suggestions, etc.
- Applicant seating chart

The Vogtle 3 & 4 facility has no post examination comments for this examination.

If you have any questions, please contact Chuck Howard at 706-848-7869.

Sincerely,

Karen D. Fili
Site Vice President

Southern Nuclear

Karen D. Fili
Site Vice President, Vogtle 3&4

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kdfili@southernco.com

April 14, 2017

ND-17-0635

U.S. Nuclear Regulatory Commission, Region II
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257,

ATTN: Mr. Daniel Bacon

VOGTLE ELECTRIC GENERATING PLANT UNITS 3&4
POST EXAMINATION PACKAGE - REDACTED

Dear Mr. Bacon,

This letter provides information related to the Vogtle 3 & 4 Initial License Exam (ILT-2) operating test that was administered during the weeks of February 27 and March 6, 2017, and the written exam that was administered on March 15, 2017.

Enclosed is Westinghouse letter SVP_SV0_004793, which contains the following:

1) AFFIDAVIT CAW-17-4551
2) PROPRIETARY INFORMATION NOTICE and COPYRIGHT NOTICE
3) Southern Nuclear Company (SNC), Letter for Transmittal to the NRC
4) "V3&4 NRC ILT-2 Admin Job Performance Measures (JPMs)" (Proprietary)
5) "V3&4 NRC ILT-2 Admin JPMs" (Non-Proprietary)
6) "V3&4 NRC ILT-2 In-Plant JPMs" (Proprietary)
7) "V3&4 NRC ILT-2 In-Plant JPMs" (Non-Proprietary)
8) "V3&4 NRC ILT-2 Sim JPMs" (Proprietary)
9) "V3&4 NRC ILT-2 Sim JPMs" (Non-Proprietary)
10) "V3&4 NRC ILT-2 Simulator Scenarios" (Proprietary)
11) "V3&4 NRC ILT-2 Simulator Scenarios" (Non-Proprietary)
12) "V3&4 NRC ILT-2 Written Exam" (Proprietary)
13) "V3&4 NRC ILT-2 Written Exam" (Non-Proprietary)

Also enclosed is the Westinghouse Application for Withholding Proprietary Information from Public Disclosure CAW-17-4551, accompanying Affidavit, Proprietary Information Notice, and Copyright Notice.

As Items 4, 6, 8, 10, and 12 contain information proprietary to Westinghouse Electric Company LLC, it is supported by an Affidavit signed by Westinghouse, the owner of the information. The Affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in paragraph (b)(4) of Section 2.390 of the Commission's regulations.

Accordingly, it is respectfully requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR Section 2.390 of the Commission's regulations.

Correspondence with respect to the copyright or proprietary aspects of the items listed above or the supporting Westinghouse Affidavit should reference CAW-17-4551 and should be addressed to James A. Gresham, Manager, Regulatory Compliance, Westinghouse Electric Company, 1000 Westinghouse Drive, Building 3 Suite 310, Cranberry Township, Pennsylvania 16066.

This letter contains no regulatory commitments. Should you have any questions, please contact John C. Howard at 706-848-7869.

Sincerely,

Karen D. Fili
Site Vice President,
VEGP 3&4
KDF/MC/amw

Enclosure: Westinghouse letter SVP_SV0_004793, "CAW-17-4551 (Transmittal of 'V3&4 NRC ILT-2 Admin JPMs,' 'V3&4 ILT-2 In-Plant JPMs,' 'V3&4 NRC ILT-2 Sim JPMs,' 'V3&4 NRC ILT-2 Simulator Scenarios,' and 'V3&4 NRC ILT-2 Written Exam')"

cc:

Southern Nuclear Operating Company
Mr. J. G. Austin (w/o enclosures)
Document Services RTYPE: VND.LI.L00 (w/o enclosures)
File AR.01.02.06 (w/o enclosures)

Southern Nuclear Operating Company
Vogtle Electric Generating Plant (VEGP) Units 3 and 4

ND-17-0635

Enclosure

Westinghouse letter SVP_SV0_004793, "CAW-17-4551 (Transmittal of 'V3&4 NRC ILT-2 Admin JPMs,' 'V3&4 ILT-2 In-Plant JPMs,' 'V3&4 NRC ILT-2 Sim JPMs,' 'V3&4 NRC ILT-2 Simulator Scenarios,' and 'V3&4 NRC ILT-2 Written Exam')"

(This Enclosure consists of 1907 pages, including this cover page)