

Facility: <u>Seabrook</u>		Date of Examination: <u>3/23-31/15</u>
Developed by: Written - Facility <input checked="" type="checkbox"/> NRC <input type="checkbox"/> // Operating - Facility <input checked="" type="checkbox"/> NRC <input type="checkbox"/>		
Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	JS
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	JS
-120	3. Facility contact briefed on security and other requirements (C.2.c)	JS
-120	4. Corporate notification letter sent (C.2.d)	JS
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 3)]	JS
{-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)	JS
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	JS
{-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 any Form ES-201-3 updates), and reference materials due (C.1.e, f, g and h; C.3.d)	JS
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	JS
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	JS
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	JS
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	JS
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	JS
-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 5; ES-202, C.2.e; ES-204)	JS
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	JS
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	JS
<p>* 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.</p> <p>[Applies only] {Does not apply} to examinations prepared by the NRC.</p>		

Facility:		Date of Examination:		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	RAB	✓	WS
	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.	RAB	✓	WS
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	RAB	✓	WS
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	RAB	✓	WS
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.	RAB	✓	WS
	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.	RAB	✓	WS
	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.	RAB	✓	WS
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.	RAB	✓	WS
	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	RAB	✓	WS
	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.	RAB	✓	WS
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.	RAB	✓	WS
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	RAB	✓	WS
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	RAB	✓	WS
	d. Check for duplication and overlap among exam sections.	RAB	✓	WS
	e. Check the entire exam for balance of coverage.	RAB	✓	WS
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	RAB	✓	WS
a. Author <u>Ralph Bryant</u> b. Facility Reviewer (*) <u>Eric Mallett</u> c. NRC Chief Examiner (#) <u>David Silk</u> d. NRC Supervisor <u>Donald Jackson</u>		Printed Name/Signature <u>Ralph Bryant</u> <u>Eric Mallett</u> <u>David Silk</u> <u>Donald Jackson</u>		Date <u>12/20/14</u> <u>12/22/14</u> <u>1/7/14</u> <u>1/7/14</u>
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines				

MASTER SECURITY AGREEMENT

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The Master Security Agreement is used for those personnel having both knowledge of and unrestricted access to Exam Sensitive Material.

1. Pre-Examination (Review TR-AA-220-1002, Attachment 1 for pre-job briefing requirements)

I acknowledge that I have acquired specialized knowledge about the 2013-2015 LOIT NRC Exam examination scheduled for the date(s) of 3/23/15 - 4/1/15 as of the date of my signature. I agree that I will not knowingly divulge any information about this examination to any persons who have not been authorized by the Exam Project Manager. I understand that I am not to instruct or provide performance feedback to those individuals scheduled to be administered this examination from this date until completion of examination administration. I also understand that I am not to evaluate individuals scheduled to be administered this examination from this date until the date of administration. Acting as a simulator booth operator or communicator is acceptable if I do not select the training content or provide direct or indirect feedback to an examinee. Furthermore, I am aware of the physical security measures and requirements (as documented in procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examination and/or an enforcement action against my facility or me. I will immediately report to the Exam Project Manager any indications or suggestions that examination security may have been compromised.

Furthermore, I agree to **NOT** discuss any aspects associated with the contents of this examination with **ANY** examinee until completion of their examination administration. I further understand that violation of the conditions of this agreement may result in cancellation of the examination and/or enforcement action against the facility licensee or me.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the examination administered during the date(s) of 3/23/15 to 3/31/15. From the date that I entered into this security agreement until completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those individuals who were administered this examination.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	Ralph Bryant	Lead Exam Author	<i>Ralph A. Bryant</i>	5/19/14	<i>Ralph A. Bryant</i>	3/31/15	
2.	Edward Lyons	Asst Exam Author	<i>Ed Lyons</i>	8/22/14	<i>Ed Lyons</i>	3/31/15	
3.	MARK LEONE	TRAINING SUPERVISOR	<i>Mark Leone</i>	10/2/14	<i>Mark Leone</i>	4/1/15	
4.	RICHARD BAIRD	FLEET OTM	<i>Rich Baird</i>	10/25/14	<i>Ralph A. Bryant</i>	4/2/15	
5.	Sean M. Riley	Senior Instructor	<i>Sean M. Riley</i>	5/1/14	<i>Sean M. Riley</i>	4/1/15	
6.	Edward R. Piggitt	Exam Project Manager	<i>Edward R. Piggitt</i>	12/4/14	<i>Edward R. Piggitt</i>	4/2/15	

MASTER SECURITY AGREEMENT

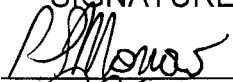

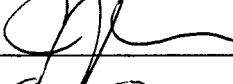
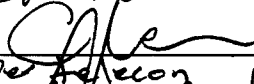
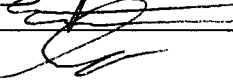
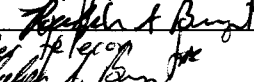
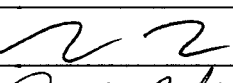
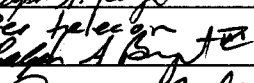

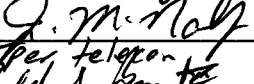
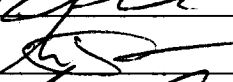
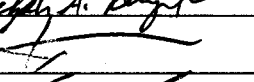

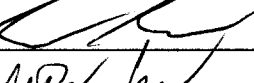
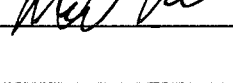
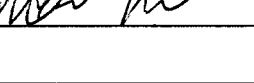
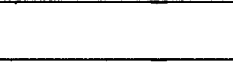
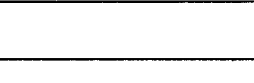
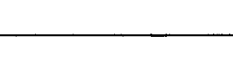
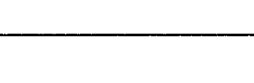
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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
7.	<u>DOUGLAS ECCLESTON</u>	<u>INSTRUCTOR/REVIEW</u>	<u>Douglas Eccleston</u>	<u>1/5/15</u>	<u>Douglas Eccleston</u>	<u>4/1/15</u>	
8.	<u>Michael Hansen</u>	<u>Reactor Operator/Validator</u>	<u>Michael Hansen</u>	<u>1/12/15</u>	<u>Michael Hansen</u>	<u>4/2/15</u>	
9.	<u>Nicholas Theberge</u>	<u>Reactor operator/validator</u>	<u>Nicholas Theberge</u>	<u>1/12/15</u>	<u>Nicholas Theberge</u>	<u>3/3/15</u>	
10.	<u>Christopher Peach</u>	<u>Senior Reactor Operator/Validator</u>	<u>Christopher Peach</u>	<u>1/12/15</u>	<u>Christopher Peach</u>	<u>3/3/15</u>	
11.	<u>Jackie Smith</u>	<u>Senior Reactor Operator/Validator</u>	<u>Jackie Smith</u>	<u>1/2/15</u>	<u>Jackie Smith</u>	<u>4/2/15</u>	
12.	<u>Christopher Robinson</u>	<u>Senior Reactor Operator/Validator</u>	<u>Christopher Robinson</u>	<u>1/12/15</u>	<u>Per telecon Ralph A. Byrte</u>	<u>4/7/15</u>	
13.	<u>DANIEL SHORIS</u>	<u>REACTOR OPERATOR / VALIDATOR</u>	<u>Daniel Shoris</u>	<u>1/28/15</u>	<u>Per telecon Ralph A. Byrte</u>	<u>4/6/15</u>	
14.	<u>Joseph Varga</u>	<u>SRO / Validator</u>	<u>Joseph Varga</u>	<u>1/28/15</u>	<u>Joseph Varga</u>	<u>4/4/15</u>	
15.	<u>Andrew Ferraioli</u>	<u>CRO validator</u>	<u>Andrew Ferraioli</u>	<u>1/28/15</u>	<u>Andrew Ferraioli</u>	<u>4/2/15</u>	
16.	<u>Tim Rossignol</u>	<u>SRO / VALIDATOR</u>	<u>Tim Rossignol</u>	<u>1/28/15</u>	<u>Tim Rossignol</u>	<u>4/2/15</u>	
17.	<u>NICHOLAS WATTS</u>	<u>SRO / VALIDATION</u>	<u>Nicholas Watts</u>	<u>2/4/15</u>	<u>Nicholas Watts</u>	<u>4/27/15</u>	
18.	<u>James Webber</u>	<u>NSO / Exam Prep Support</u>	<u>James Webber</u>	<u>2/11/15</u>	<u>Per telecon Ralph A. Byrte</u>	<u>4/13/15</u>	
19.	<u>Robert Howe</u>	<u>SRO / VALIDATOR</u>	<u>Robert Howe</u>	<u>2-17-15</u>	<u>Robert Howe</u>	<u>3-31-15</u>	
20.	<u>LUCY ANN GANNON</u>	<u>SRO VALIDATION</u>	<u>Lucy Ann Gannon</u>	<u>2/17/15</u>	<u>Per telecon Ralph A. Byrte</u>	<u>4/6/15</u>	

NOTES:

MASTER SECURITY AGREEMENT

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
7.	Scott Morrow	CRO		2/17/15		4/2/15	
8.	Curtis Adams	LOI SUPERVISOR		2/24/15		4/1/15	
9.	Eel Kotkowski	CRO		3/6/15	Per telecon 	4/15/15	
10.	Rick Connolly	US		3/6/15	Per telecon 	4/6/15	
11.	Patrick Kelliher	CRO		3/6/15	Per telecon 	4/10/15	
12.	Jeff McNally	US		3/6/15		4/2/15	
13.	Andy Caramello	SM		3-6-15	Per telecon 	4/10/15	
14.	Mark Mastellone	LOI Instructor		3/19/15		4/1/15	
15.	Bery Boulby	AOM Team		3/23/15		4/1/15	
16.	Matthew Leander	LOI Instructor		3/25/15		4/1/15	
17.							
18.							
19.							
20.							

NOTES:



LIMITED SECURITY AGREEMENT

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The Limited Security Agreement is used for those personnel having limited knowledge of, without unrestricted access to, Exam Sensitive Material.

1. Pre-Examination (Review TR-AA-220-1002, Attachment 1 for pre-job briefing requirements)

I acknowledge that I have acquired specialized knowledge about the 2013-2015 SEABROOK LIT NRC EXAM examination scheduled for the date(s) of 3/23/15 - 4/1/15 as of the date of my signature. I agree that I will not knowingly divulge any information about this examination to any persons who have not been authorized by the Exam Project Manager. I understand that I am not to instruct or provide performance feedback to those individuals scheduled to be administered this examination from this date until completion of examination administration. I also understand that I am not to evaluate individuals scheduled to be administered this examination from this date until the date of administration. Acting as a simulator booth operator or communicator is acceptable if I do not select the training content or provide direct or indirect feedback to an examinee. Furthermore, I am aware of the physical security measures and requirements (as documented in procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examination and/or an enforcement action against my facility or me. I will immediately report to the Exam Project Manager any indications or suggestions that examination security may have been compromised.

Furthermore, I agree to NOT discuss any aspects associated with the contents of this examination with ANY examinee until completion of their examination administration. I further understand that violation of the conditions of this agreement may result in cancellation of the examination and/or enforcement action against the facility licensee or me.

2. Post-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	GERALD GAUDING	Peer Reviewer		12/18/14	Per telecon with [illegible]	4/6/15	
2.	Randall Amundson	Peer Reviewer		1/8/15	per telecon with [illegible]	4/1/15	
3.	Jeffrey A Hodge	Peer Reviewer		1/8/15	per telecon with [illegible]	4/6/15	
4.	Andrew Zoumas	Peer Reviewer		1/8/15	per telecon with [illegible]	4/1/15	
5.							
6.							

LIMITED SECURITY AGREEMENT

(Page 1 of 2)

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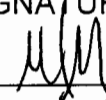
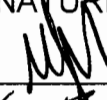
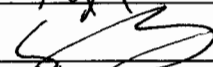
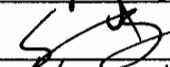
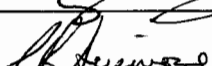
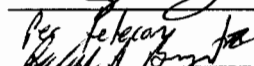
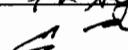
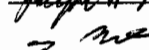
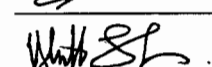

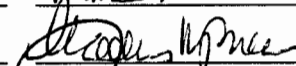
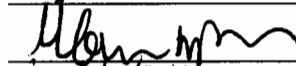

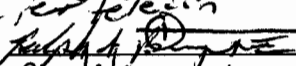
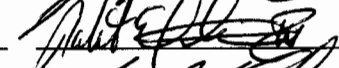
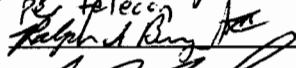


2. Post-Examination

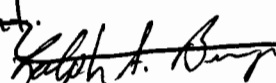
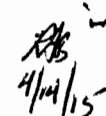
To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the examination administered during the date(s) of 3/23/15 to 3/31/15. From the date that I entered into this security agreement until completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those individuals who were administered this examination.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	<u>RICH FURMANICK</u>	<u>SIM SUPPORT</u>	<u>[Signature]</u>	<u>11/18/14</u>	<u>[Signature]</u>	<u>4/1/15</u>	
2.	<u>DANA MERRILL</u>	<u>"</u>	<u>[Signature]</u>	<u>11/18/14</u>	<u>[Signature]</u>	<u>4/1/15</u>	
3.	<u>JYE-YUH LEE</u>	<u>"</u>	<u>[Signature]</u>	<u>11/18/14</u>	<u>[Signature]</u>	<u>4/1/15</u>	
4.	<u>SHIH-WEI TAN</u>	<u>Sim Support</u>	<u>[Signature]</u>	<u>11/18/14</u>	<u>[Signature]</u>	<u>4/9/15</u>	
5.	<u>Marc McEathie</u>	<u>CRO</u>	<u>[Signature]</u>	<u>12/15/14</u>	<u>[Signature]</u>	<u>4/7/15</u>	
6.	<u>Mimi Shirkland</u>	<u>CRO</u>	<u>[Signature]</u>	<u>12-15-14</u>	<u>[Signature]</u>	<u>4/7/15</u>	

LIMITED SECURITY AGREEMENT

(Page 2 of 2)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
7.	MICHAEL MAGZI	SRO Validator		12/15/14		3/31/15	
8.	William Barr	SRO		12/15/14		3/31/15	
9.	Chuck Sizemore	TRAINING DIRECTOR		12/15/14		4/6/15	
10.	Eric Mallett	App / Project Supervisor		12/15/14		4/7/15	
11.	Matt Larrabee	SRO Validator		12/15/14		4/2/15	
12.	Noureen Lipman	PLANT TECH		1/9/15		4.1.15	
13.	John Thompson	HVAC TECH		1-25-15		4/14/15	①
14.	ROBERT E. JENKINS III	ELECTRICIAN		09/06/15		4/7/15	
15.	JAMES KENNISH	LOCT INSTRUCTOR		3/16/15		4/1/15	
16.							
17.							
18.							
19.							
20.							

NOTES: ① John Thompson is out on long term medical leave. was working on AC system in simulator during Evans development.  4/7/15
 4/14/15

Facility: SEABROOK		Date of Examination: 2015		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).	RAB	EM	WJ	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	RAB	EM	WJ	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	RAB	EM	WJ	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	RAB	EM	WJ	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	RAB	EM	WJ	
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 	RAB	EM	WJ	
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.	RAB	EM	WJ	
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.		RAB	EM	WJ	
		Printed Name / Signature		Date	
a.	Author	Ralph Bryant / <i>Ralph A. Bryant</i>		3/4/15	
b.	Facility Reviewer(*)	Eric Mallett / <i>EM</i>		3/4/15	
c.	NRC Chief Examiner (#)	David Silk / <i>David Silk</i>		3/9/15	
d.	NRC Supervisor	Donald Jackson / <i>Donald Jackson</i>		3/12/15	
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

Facility: SEABROOK		Date of Exam: 2015		Scenario Numbers: A/ B / C		Operating Test No.:	
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.	RAB	✓	W			
2.	The scenarios consist mostly of related events.	RAB	✓	W			
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) 	RAB	✓	W			
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.	RAB	✓	W			
5.	The events are valid with regard to physics and thermodynamics.	RAB	✓	W			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	RAB	✓	W			
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.	RAB	✓	W			
8.	The simulator modeling is not altered.	RAB	✓	W			
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.	RAB	✓	W			
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.	RAB	✓	W			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	RAB	✓	W			
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).	RAB	✓	W			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	RAB	✓	W			
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes	--	--	--		
1.	Total malfunctions (5–8)	6/ 6 /5	RAB	✓	W		
2.	Malfunctions after EOP entry (1–2)	2/ 2 /2	RAB	✓	W		
3.	Abnormal events (2–4)	2/ 3 /2	RAB	✓	W		
4.	Major transients (1–2)	1/ 1 /1	RAB	✓	W		
5.	EOPs entered/requiring substantive actions (1–2)	2/ 3 /3	RAB	✓	W		
6.	EOP contingencies requiring substantive actions (0–2)	1/ 0 /1	RAB	✓	W		
7.	Critical tasks (2–3)	2/ 2 /2	RAB	✓	W		

Facility: Seabrook				Date of Exam: March 2015				Operating Test No.:											
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 Back-up								
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION								
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P						
M A S T E R	RX		1			1			1			1					1	1	0
	NOR	1		1	1		1	1		1	1		1				1	1	1
	I/C	2,3,5,6	2,5	3,6	2,3,4,6,7	2,3	4,6,7	2,3,4	2,4	2,3	2,3,4,6,7	3,4,6	2,7				2	2	2
	MAJ	4	4	4	5	5	5	5	5	5	5	5	5				1	1	1
	TS	2			2,3,4			2,4			3,4						0	2	2
SRO I-1 <input checked="" type="checkbox"/>	RX		1													1	1	1	0
	NOR				1				1							2	1	1	1
	I/C		2,5		2,3,4,6,7				2,3							9	4	4	2
	MAJ		4		5				5							3	2	2	1
	TS				2,3,4											3	0	2	2
SRO I-2 <input checked="" type="checkbox"/>	RX					1										1	1	1	0
	NOR	1						1								2	1	1	1
	I/C	2,3,5,6				2,3		2,3,4								9	4	4	2
	MAJ	4				5		5								3	2	2	1
	TS	2						2,4								3	0	2	2
SRO I-3 <input checked="" type="checkbox"/>	RX		1													1	1	1	0
	NOR				1				1							2	1	1	1
	I/C		2,5		2,3,4,6,7				2,3							9	4	4	2
	MAJ		4		5				5							3	2	2	1
	TS				2,3,4											3	0	2	2

Instructions:

- Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an Instant SRO *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.
- Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.
- Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirements specified for the applicant's license level in the right-hand columns.

Facility: Seabrook			Date of Exam: March 2015									Operating Test No.:					
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 Back-up						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P				
SRO U-1 <input checked="" type="checkbox"/>	RX													0	1	1	0
	NOR	1						1						2	1	1	1
	I/C	2,3,5,6						2,3,4						7	4	4	2
	MAJ	4						5						2	2	2	1
	TS	2						2,4						3	0	2	2
SRO U-2 <input checked="" type="checkbox"/>	RX													0	1	1	0
	NOR	1			1									2	1	1	1
	I/C	2,3,5,6			2,3,4,6,7									9	4	4	2
	MAJ	4			5									2	2	2	1
	TS	2			2,3,4									4	0	2	2
RO-1 <input checked="" type="checkbox"/>	RX					1								1	1	1	0
	NOR			1										1	1	1	1
	I/C			3,6		2,3								4	4	4	2
	MAJ			4		5								2	2	2	1
	TS													0	0	2	2
RO-2 <input checked="" type="checkbox"/>	RX							1						1	1	1	0
	NOR					1								1	1	1	1
	I/C					4,6,7		2,4						5	4	4	2
	MAJ					5		5						2	2	2	1
	TS													0	0	2	2

Instructions:

- Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an Instant SRO *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.
- Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.
- Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirements specified for the applicant's license level in the right-hand columns.

Facility: Seabrook			Date of Exam: March 2015									Operating Test No.:					
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 Back-up						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P				
															R	I	U
RO-3 <input checked="" type="checkbox"/>	RX		1											1	1	1	0
	NOR						1							1	1	1	1
	I/C		2,5				4,6,7							5	4	4	2
	MAJ		4				5							2	2	2	1
	TS													0	0	2	2
RO-4 <input checked="" type="checkbox"/>	RX					1								1	1	1	0
	NOR			1										1	1	1	1
	I/C			3,6		2,3								4	4	4	2
	MAJ			4		5								2	2	2	1
	TS													0	0	2	2
RO-5 <input checked="" type="checkbox"/>	RX							1						1	1	1	0
	NOR			1			1							2	1	1	1
	I/C			3,6			4,6,7		2,4					7	4	4	2
	MAJ			4			5		5					3	2	2	1
	TS													0	0	2	2
<input type="checkbox"/>	RX																
	NOR																
	I/C																
	MAJ																
	TS																

Instructions:

- Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an Instant SRO *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.
- Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.
- Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirements specified for the applicant's license level in the right-hand columns.

Facility:	SEABROOK				Date of Examination:	2015				Operating Test No.:						
Competencies	APPLICANTS															
	RO <input type="checkbox"/> SRO-I1 X SRO-U <input type="checkbox"/>				RO <input type="checkbox"/> SRO-I2 X SRO-U <input type="checkbox"/>				RO <input type="checkbox"/> SRO-I3 X SRO-U <input type="checkbox"/>				RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U1 X			
	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	245	235	345		24	235	234 5		24 5	23 5	345		24		234 5	
Comply With and Use Procedures (1)	124 5	123 45	123 5		12 34 56	123 5	123 45		12 45	12 34 5	123 5		12 34 56		123 45	
Operate Control Boards (2)	124 5		123 5			235			12 45		123 5					
Communicate and Interact	124 5	234 567	123 5		12 34 56	235	123 45		12 45	23 45 67	123 5		12 34 56		123 45	
Demonstrate Supervisory Ability (3)		234 567			12 34 56		123 45			23 45 67			12 34 56		123 45	
Comply With and Use Tech. Specs. (3)		234			2		24			23 4			2		24	
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																

Instructions:

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

Facility: **SEABROOK**Date of Examination: **2105**

Operating Test No.:

Competencies	APPLICANTS															
	RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U2 <input checked="" type="checkbox"/>				RO1 <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>				RO2 <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>				RO3 <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>			
	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	24	235			34 6	235				45 67	245		24 5	456 7		
Comply With and Use Procedures (1)	123 456	123 45			13 46	123 5				14 5	124 5		12 45	145		
Operate Control Boards (2)					13 46	235				45 67	124 5		12 45	456 7		
Communicate and Interact	123 456	234 567			13 46	235				45 67	124 5		12 45	456 7		
Demonstrate Supervisory Ability (3)	123 456	234 567														
Comply With and Use Tech. Specs. (3)	2	234														

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Facility: SEABROOK		Date of Examination: 2015		Operating Test No.:													
Competencies	APPLICANTS																
	RO4 X SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>				RO5 X SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>				RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>				RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>				
	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		346	235			34 6	456 7	245								
Comply With and Use Procedures (1)		134 6	123 5			13 46	145	124 5									
Operate Control Boards (2)		134 6	235			13 46	456 7	124 5									
Communicate and Interact		134 6	235			13 46	456 7	124 5									
Demonstrate Supervisory Ability (3)																	
Comply With and Use Tech. Specs. (3)																	
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																	

Instructions:

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

Facility: Seabrook		Date of Exam: March 2015		Exam Level: RO X SRO X		
Item Description				Initial		
				a	b*	c*
1. Questions and answers are technically accurate and applicable to the facility.				RAB	✓	✓
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.				RAB	✓	✓
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401				RAB	✓	✓
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).						✓
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input type="checkbox"/> the examinations were developed independently; or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)				RAB	✓	✓
6. Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank	Modified	New	RAB	✓	✓
	42 / 14 56% / 60% 56.0%	6 / 0 8% / 0%	27 / 11 36% / 40% 36.0%			
7. Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/ analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory		C/A	RAB	✓	✓
	30/4 40% / 16%		45/21 60% / 84%			
8. References/handouts provided do not give away answers or aid in the elimination of distractors.				RAB	✓	✓
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.				RAB	✓	✓
10. Question psychometric quality and format meet the guidelines in ES Appendix B.				RAB	✓	✓
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.				RAB	✓	✓
Printed Name / Signature a. Author <u>Ralph Bryant / Ralph D. Bryant</u> b. Facility Reviewer (*) <u>Eric Melot / Eric Melot</u> c. NRC Chief Examiner (#) <u>David S. Ilic / David S. Ilic</u> d. NRC Regional Supervisor <u>Donald Jackson / Donald Jackson</u>				Date 3/9/15 3/10/15 3/12/15 3/23/15		
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.						

Facility: <u>SEABROOK</u>		Date of Exam: <u>3/31/15</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	RAB	mm	DS	
2.	Answer key changes and question deletions justified and documented	RAB	mm	NA	
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	RAB	mm	WJ TF	
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	RAB	mm	NA	
5.	All other failing examinations checked to ensure that grades are justified	RAB	mm	NA	
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	RAB	mm	DS	

	Printed Name/Signature	Date
a. Grader	<u>Ralph A. Bonyon</u>	<u>4/1/15</u>
b. Facility Reviewer(*)	<u>Mark Martellotto</u>	<u>4/2/15</u>
c. NRC Chief Examiner (*)	<u>TODD FISH</u> / <u>Todd Fish</u> <u>David Silk</u> / <u>David Silk</u>	<u>4/10/15</u> <u>4/3/15</u>
d. NRC Supervisor (*)	<u>DONALD JACKSON</u>	<u>4/13/15</u>

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