

Facility: <u>PBARS</u>		Date of Examination: <u>2/25/2019</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
-240	1. Examination administration date confirmed (C.1.a; C.2.a-b). For NRC-prepared exams, arrangements are made for the facility to submit reference materials (C.1.e; C.3.c; Attachment 3).	TF
-210	2. NRC examiners and facility contact assigned (C.1.d; C.2.f).	TF
-210	3. Facility contact briefed on security and other requirements (C.2.c). As applicable, the facility contact submits to the NRC any prescreened K/As for elimination from the written examination outline, with a description of the facility's prescreening process (ES-401, D.1.b).	TF
-210	4. Reference material due for NRC-prepared exams (C.1.e; C.3.c; Attachment 3).	NA
-210	5. Corporate notification letter sent (C.2.e).	TF
-195	6. NRC-developed written examination outline (ES-401-1/2 or ES-401N-1/2 and ES-401-3 or ES-401N-3) sent to facility contact (must be on the exam security agreement) (C.1.e-f; C.2.h; C.3.d-e).	TF
-150	7. Operating test outline(s) and other checklists due, including Forms ES-201-2, ES-201-3, ES-301-1, ES-301-2, ES-301-5, and ES-D-1, as applicable (C.1.e-f; C.3.d-e).	TF
-136	8. Operating test outline(s) reviewed by the NRC and feedback provided to facility licensee (C.2.h; C.3.d-e).	TF
-75	9. Proposed examinations (written, JPMs, and scenarios, as applicable) and outlines (Forms ES-301-1, ES-301-2, ES-D-1, ES-401-1/2 or ES-401N-1/2, and ES-401-3 or ES-401N-3); supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, ES-401-6, ES-401N-6, and any Form ES-201-2 and ES-201-3 updates); and reference materials due (C.1.e-h; C.3.d).	TF
-75	10. Examinations prepared by the NRC are approved by the NRC supervisor and forwarded for facility licensee review (C.1.i; C.2.h; C.3.f-g).	NA
-60	11. Preliminary waiver/excusal requests due (C.1.m; C.2.c; ES-202).	TF
-50	12. Written exam and operating test reviews completed (C.3.f).	TF
-35	13. Examination review results discussed between the NRC and facility licensee (C.1.i; C.1.k-l; C.2.h; C.3.g). The NRC and the facility licensee conduct exam preparatory week.	TF
-30	14. Preliminary license applications and waiver/excusal requests, as applicable (NRC Form 398) due (C.1.m; C.2.i; ES-202).	TF
-14	15. Final license applications and waiver/excusal requests, as applicable (NRC Form 398), due and Form ES-201-4 prepared (C.1.m; C.2.k; ES-202).	TF
-7	16. Written examinations and operating tests approved by the NRC supervisor (C.2.j-k; C.3.h).	TF
-7	17. Request facility licensee management feedback on the examination (C.2.l).	TF
-7	18. Final applications reviewed; one or two (if more than 10) applications audited to confirm qualifications/eligibility; and examination approval and waiver/excusal letters sent (C.2.k; Attachment 5; ES-202, C.3.j; ES-204).	TF
-7	19. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k).	TF
-7	20. Approved scenarios and job performance measures distributed to NRC examiners (C.3.i).	TF
* Target dates are based on facility-prepared examinations and the examination date identified in the corporate notification letter. These dates are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.		

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1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the U.S. Nuclear Regulatory Commission (NRC) licensing examinations scheduled for the week(s) of 2/25/19 - 3/4/19 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's 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's 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 2/25/19 - 3/4/19. 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.

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PRINTED NAME	JOB TITLE/RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. Robert J. Artus	Exam Author	<i>[Signature]</i>	6/6/18	<i>[Signature]</i>	3/8/19	
2. Christopher Ferrara	Exam author	<i>[Signature]</i>	6/11/18	<i>[Signature]</i>	3/8/19	
3. RACHELLE HANFMAN	Admin Coordinator	<i>[Signature]</i>	4/11/18	<i>[Signature]</i>	3/15/19	2
4. Michele Amberman	Admin Coordinator	<i>[Signature]</i>	6-11-18	<i>[Signature]</i>	3/13/19	1
5. Virginia Billings	Admin Coordinator	<i>[Signature]</i>	6-11-18	<i>[Signature]</i>	3/12/19	1
6. DAVID MONTANAN	OTPS	<i>[Signature]</i>	6-13-18	<i>[Signature]</i>	3/19/19	2
7. AFSheen Khatami	Sim Support	<i>[Signature]</i>	8/10/18	<i>[Signature]</i>	3/19/19	
8. Pat Gajewski	Sim Support	<i>[Signature]</i>	8-10-18	<i>[Signature]</i>	3/13/19	
9. CHRIS WECHTER	SMOSS	<i>[Signature]</i>	8/13/18	<i>[Signature]</i>	3/8/19	-
10. RUDY TYLER	Sim Coordinator	<i>[Signature]</i>	8/16/18	<i>[Signature]</i>	3/19/19	
11. MATTHEW GRUND	SRO/Technical Reviewer	<i>[Signature]</i>	8/17/18	<i>[Signature]</i>	3/14/19	2
12. Francois BOSS	Sim Support	<i>[Signature]</i>	10/25/18	<i>[Signature]</i>	3/19/19	2
13. DIEGO VEGA	RO	<i>[Signature]</i>	11/5/18	<i>[Signature]</i>	3/14/19	
14. CHRIS TRULMAN	SRO	<i>[Signature]</i>	11/5/18	<i>[Signature]</i>	3/15/19	
15. MATTHEW BARDORF	RO	<i>[Signature]</i>	11/5/18	<i>[Signature]</i>	3/15/19	

NOTES:

- 1. per telecon
- 2. per email

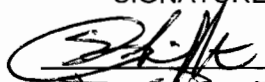





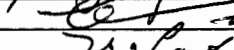
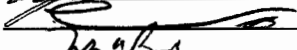
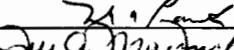
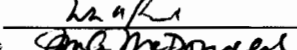

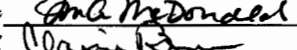
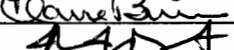

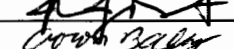
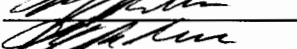
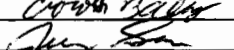
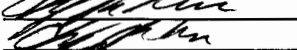
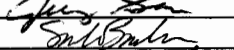
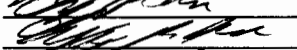
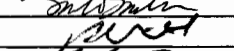
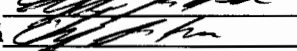
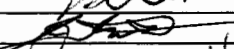
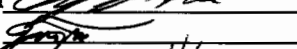
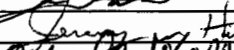
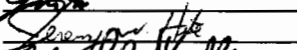
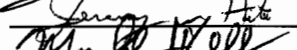



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1. <u>EHRON WRIGHT</u>	<u>SRO</u>		<u>11-5-18</u>		<u>3-5-19</u>	
2. <u>Duncan Burgess</u>	<u>Sim Support</u>		<u>11-9-18</u>		<u>3/17/19</u>	<u>2</u>
3. <u>MATTHEW J. DASHMIREL</u>	<u>RO</u>		<u>11-15-18</u>		<u>3/14/19</u>	<u>2</u>
4. <u>Charles E. McDavid</u>	<u>RO</u>		<u>11-15-18</u>		<u>3-14-19</u>	
5. <u>Mark A. Lerch</u>	<u>SRO</u>		<u>11-19-18</u>		<u>3-14-19</u>	
6. <u>JULIE MCKINZIE</u>	<u>EPM</u>		<u>11-29-18</u>		<u>3/15/19</u>	
7. <u>CLAIRE BUEE</u>	<u>SR. OPS INSTRUCTOR</u>		<u>12/21/18</u>		<u>3/15/19</u>	
8. <u>JOHN DOUGHERTY</u>	<u>SRO</u>		<u>11/15/19</u>		<u>3/14/19</u>	<u>2</u>
9. <u>Aaron Baldwin</u>	<u>SRO</u>		<u>1/15/19</u>		<u>3/14/19</u>	<u>2</u>
10. <u>Jeremy Senev</u>	<u>SRO</u>		<u>11/7/19</u>		<u>3/14/19</u>	<u>2</u>
11. <u>Sarah Brochu</u>	<u>SRO</u>		<u>1/17/19</u>		<u>3/14/19</u>	<u>2</u>
12. <u>DAVE BUNNEN</u>	<u>IC</u>		<u>1-28-19</u>		<u>3/21/19</u>	<u>3</u>
13. <u>Joshua Smith</u>	<u>RO</u>		<u>2-8-19</u>		<u>3-13-19</u>	
14. <u>JEREMY W. HEITZ</u>	<u>SRO</u>		<u>2-8-19</u>		<u>3-14-19</u>	
15. <u>MICHAEL J. KELLY</u>	<u>INSTRUCTOR</u>		<u>2-25-19</u>		<u>3/8/19</u>	

NOTES:

- 1. per telecon
- 2. per email
- 3. Unable to contact - out on medical leave

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PRINTED NAME	JOB TITLE/RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. Sara Andersen	Instructor	<i>Sara Andersen</i>	2-25-19	<i>Sara R Andersen</i>	3-12-19	
2. Charles P. Millard	Ops Training Manager	<i>Charles P. Millard</i>	2/25/19	<i>Charles P. Millard</i>	3-11-19	
3. Josh Kivill	ILT Lead	<i>Josh Kivill</i>	2-25-19	<i>Josh Kivill</i>	3-11-19	
4. BRAD POWELL	INSTRUCTOR	<i>Brad Powell</i>	2/25/19	<i>Brad Powell</i>	3/12/19	
5. Van McCreland	Instructor	<i>Van McCreland</i>	2-25-19	<i>Van McCreland</i>	3-12-19	
6. Matthew Pitman	Instructor	<i>Matthew Pitman</i>	2/25/19	<i>Matthew Pitman</i>	3/11/19	
7. Daniel MacNeal	Instructor	<i>Daniel MacNeal</i>	2/28/19	<i>Daniel MacNeal</i>	3/12/19	
8. Brad Kirkman	Instructor	<i>Brad Kirkman</i>	3/7/19	<i>Brad Kirkman</i>	3/12/19	
9.						
10.						
11.						
12.						
13.						
14.						
15.						

NOTES:

Facility: Peach Bottom		Date of Examination: 2/25/2019		Operating Test Number: 2019 NRC	
1. General Criteria		Initials			
		a	b*	c#	
a.	The operating test conforms to the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	CF	W	TF	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	CF	W	TF	
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a.).	CF	W	TF	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	CF	W	TF	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	CF	W	TF	
2. Walkthrough 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 	CF	W	TF	
b.	Ensure that any changes from the previously approved systems and administrative walkthrough outlines (Forms ES-301-1 and ES-301-2) have not caused the test to deviate from any of the acceptance criteria (e.g., item distribution, bank use, repetition from the last two NRC examinations) specified on those forms and Form ES-201-2.	CF	W	TF	
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.		CF	W	TF	
	Printed Name/Signature	Date			
a.	Author Christopher Ferrara	2/15/19			
b.	Facility Reviewer (*) Christopher Weichler	2/15/19			
c.	NRC Chief Examiner (#) TODD FISH	2/19/19			
d.	NRC Supervisor DONALD JACKSON	2/19/19			
* The facility licensee signature is not applicable for NRC-developed tests.					
# The independent NRC reviewer initials items in column "c"; the chief examiner concurrence is required.					

Facility: Peach Bottom		Date of Exam: 2/25/2019		Scenario Numbers: 1 / 2 / 3		Operating Test No.: 2019 NRC	
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.	CF	✓	TF			
2.	The scenarios consist mostly of related events.	CF	✓	TF			
3.	Each event description consists of the following: <ul style="list-style-type: none"> 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) 	CF	✓	TF			
4.	The events are valid with regard to physics and thermodynamics.	CF	✓	TF			
5.	Sequencing and timing of events is reasonable and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	CF	✓	CF			
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.	CF	✓	TF			
7.	The simulator modeling is not altered.	CF	✓	CF			
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.	CF	✓	TF			
9.	Scenarios are new or significantly modified in accordance with Section D.5 of ES-301.	CF	✓	TF			
10.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	CF	✓	CF			
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.)	CF	✓	TF			
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).	CF	✓	TF			
13.	Applicants are evaluated on a similar number of preidentified critical tasks across scenarios, when possible.	CF	✓	TF			
14.	The level of difficulty is appropriate to support licensing decisions for each crew position.	CF	✓	TF			
Target Quantitative Attributes per Scenario (See Section D.5.d)		Actual Attributes	--	--	--		
1.	Malfunctions after EOP entry (1-2)	2/2/2	CF	✓	TF		
2.	Abnormal events (2-4)	3/2/3	CF	✓	CF		
3.	Major transients (1-2)	2/1/2	CF	✓	TF		
4.	EOPs entered/requiring substantive actions (1-2)	2/1/2	CF	✓	TF		
5.	Entry into a contingency EOP with substantive actions (≥ 1 per scenario set)	1/1/1	CF	✓	TF		
6.	Preidentified critical tasks (≥ 2)	2/3/2	CF	✓	CF		
* The facility licensee signature is not applicable for NRC-developed tests. # An independent NRC reviewer initials items in column "c"; chief examiner concurrence is required.							

Facility: Peach Bottom		Date of Exam: 2/25/2019	Scenario Number: 4	Operating Test No.: 2019 NRC		
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.	CF	W	TF		
2.	The scenarios consist mostly of related events.	CF	W	TF		
3.	Each event description consists of the following: <ul style="list-style-type: none"> 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) 	CF	W	TF		
4.	The events are valid with regard to physics and thermodynamics.	CF	W	TF		
5.	Sequencing and timing of events is reasonable and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	CF	W	TF		
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.	CF	W	TF		
7.	The simulator modeling is not altered.	CF	W	TF		
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.	CF	W	TF		
9.	Scenarios are new or significantly modified in accordance with Section D.5 of ES-301.	CF	W	TF		
10.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	CF	W	TF		
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.)	CF	W	CF		
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).	CF	W	CF		
13.	Applicants are evaluated on a similar number of preidentified critical tasks across scenarios, when possible.	CF	W	TF		
14.	The level of difficulty is appropriate to support licensing decisions for each crew position.	CF	W	TF		
Target Quantitative Attributes per Scenario (See Section D.5.d)		Actual Attributes		--	--	--
1.	Malfunctions after EOP entry (1-2)	3		CF	W	TF
2.	Abnormal events (2-4)	4		CF	W	TF
3.	Major transients (1-2)	2		CF	W	TF
4.	EOPs entered/requiring substantive actions (1-2)	2		CF	W	TF
5.	Entry into a contingency EOP with substantive actions (≥ 1 per scenario set)	2		CF	W	TF
6.	Preidentified critical tasks (≥ 2)	3		CF	W	TF
* The facility licensee signature is not applicable for NRC-developed tests. # An independent NRC reviewer initials items in column "c"; chief examiner concurrence is required.						

Facility: Peach Bottom		Date of Exam: 2/25/2019									Operating Test No.: 2019 NRC						
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		1			2			3			4						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P		R	I	U
RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U 1 <input checked="" type="checkbox"/>	RX	1			5									2	1	1	0
	NOR	2			1									2	1	1	1
	I/C	6,7			4,6,7									5	4	4	2
	MAJ	8,11			8									3	2	2	1
	TS	3,5			2,3									4	0	2	2
RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U 2 <input checked="" type="checkbox"/>	RX	1					2							2	1	1	0
	NOR	2					1							2	1	1	1
	I/C	6,7					3,5,6							5	4	4	2
	MAJ	8,11					7,10							4	2	2	1
	TS	3,5					4,6							4	0	2	2
RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														0	2	2
RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														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 (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.
- 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 I/C malfunctions on a one-for-one 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.
- For new reactor facility 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: Peach Bottom		Date of Exam: 2/25/2019						Operating Test No.: 2019 NRC									
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		1			2			3			4						
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P				
RO <input type="checkbox"/>	SRO-I 1 <input checked="" type="checkbox"/>	RX	1						2					2	1	1	0
		NOR	2				1							2	1	1	1
		I/C	6,7				3,4			5,6				6	4	4	2
	SRO-U <input type="checkbox"/>	MAJ	8,11				8			7,10				5	2	2	1
		TS	3,5											2	0	2	2
RO <input type="checkbox"/>	SRO-I 2 <input checked="" type="checkbox"/>	RX		1		5								2	1	1	0
		NOR				1				1				2	1	1	1
		I/C		4,6		4,6,7				3,6				7	4	4	2
	SRO-U <input type="checkbox"/>	MAJ		8,11		8				7,10				5	2	2	1
		TS				2,3								2	0	2	2
RO <input type="checkbox"/>	SRO-I 3 <input checked="" type="checkbox"/>	RX				5			2					2	1	1	0
		NOR			2				1					2	1	1	1
		I/C		5,7		6,7			3,5,6					7	4	4	2
	SRO-U <input type="checkbox"/>	MAJ		8,11		8			7,10					5	2	2	1
		TS							4,6					2	0	2	2
RO <input type="checkbox"/>	SRO-I 4 <input checked="" type="checkbox"/>	RX				5			2					2	1	1	0
		NOR				1								1	1	1	1
		I/C				4,6,7			5,6					5	4	4	2
	SRO-U <input type="checkbox"/>	MAJ				8			7,10					3	2	2	1
		TS				2,3								2	0	2	2
Instructions:																	
<ol style="list-style-type: none"> 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 <i>additionally</i> 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 <i>controlled</i> 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 I/C malfunctions on a one-for-one 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. For new reactor facility 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: Peach Bottom			Date of Exam: 2/25/2019						Operating Test No.: 2019 NRC								
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		1			2			3			4						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P				
RO <input type="checkbox"/> X SRO-I 5 SRO-U <input type="checkbox"/>	RX	1						2				2		3	1	1	0
	NOR	2						1						2	1	1	1
	I/C	6,7						3,5,6				3,6		7	4	4	2
	MAJ	8,11						7,10				7,9		6	2	2	1
	TS	3,5						4,6						4	0	2	2
RO <input type="checkbox"/> X SRO-I 6 SRO-U <input type="checkbox"/>	RX		1		5							2		3	1	1	0
	NOR				1							1		2	1	1	1
	I/C		4,6		4,6,7							3,6		7	4	4	2
	MAJ		8,11		8							7,9		5	2	2	1
	TS				2,3							4,5		4	0	2	2
RO 1 X SRO-I SRO-U <input type="checkbox"/>	RX		1											1	1	1	0
	NOR					1								1	1	1	1
	I/C		4,6			3,4								4	4	4	2
	MAJ		8,11			8								3	2	2	1
	TS													0	0	2	2
RO 2 X SRO-I SRO-U <input type="checkbox"/>	RX				5									1	1	1	0
	NOR			2										1	1	1	1
	I/C			5,7		6,7								4	4	4	2
	MAJ			8,11		8								3	2	2	1
	TS													0	0	2	2
Instructions: <ol style="list-style-type: none"> 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 <i>additionally</i> 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 <i>controlled</i> 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 I/C malfunctions on a one-for-one 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. For new reactor facility 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: Peach Bottom			Date of Exam: 2/25/2019						Operating Test No.: 2019 NRC								
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		1			2			3			4						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP				
RO 3 <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U	RX	1											1	1	1	0	
	NOR					1			1					2	1	1	1
	I/C	4,6				3,4			3,6					6	4	4	2
	MAJ	8,11				8			7,10					5	2	2	1
	TS													0	0	2	2
RO 4 <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U	RX				5									1	1	1	0
	NOR		2											1	1	1	1
	I/C		5,7		6,7									4	4	4	2
	MAJ		8,11		8									3	2	2	1
	TS													0	0	2	2
RO 5 <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U	RX				5									1	1	1	0
	NOR		2						1					2	1	1	1
	I/C		5,7		6,7				3,6					6	4	4	2
	MAJ		8,11		8				7,10					5	2	2	1
	TS													0	0	2	2
RO 6 <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U	RX							2						1	1	1	0
	NOR					1						1		2	1	1	1
	I/C				3,4			5,6				4,5		6	4	4	2
	MAJ				8			7,10				7,9		5	2	2	1
	TS													0	0	2	2
Instructions: <ol style="list-style-type: none"> 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 <i>additionally</i> 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 <i>controlled</i> 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 I/C malfunctions on a one-for-one 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. For new reactor facility 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: Peach Bottom Date of Examination: 2/25/2019 Operating Test No.: 2019 NRC

Competencies	APPLICANTS															
	RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U 1 <input checked="" type="checkbox"/>				RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U 2 <input checked="" 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	1-11	1-10			1-11		1-10									
Comply with and Use Procedures (1)	1-11	1-10			1-11		1-10									
Operate Control Boards (2)																
Communicate and Interact	1-11	1-10			1-11		1-10									
Demonstrate Supervisory Ability (3)	1-11	1-10			1-11		1-10									
Comply with and Use TS (3)	3,5	2,3			3,5		4,6									

Notes:
 (1) Includes TS 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.) (Forms ES 303 1 and ES 303 3 describe the competency rating factors.)

Facility: Peach Bottom		Date of Examination: 2/25/2019				Operating Test No.: 2019 NRC										
Competencies	APPLICANTS															
	RO <input type="checkbox"/> SRO-I 1 <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>				RO <input type="checkbox"/> SRO-I 2 <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>				RO <input type="checkbox"/> SRO-I 3 <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>				RO <input type="checkbox"/> SRO-I 4 <input checked="" 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	1-11	1,3,4,8	2,5,6,7,10		1,4,6,8,11	1-10	1,3,6,7,10		2,5,7,8,11	5,6,7,8	1-10			1-10	2,5,6,7,10	
Comply with and Use Procedures (1)	1-11	1,3,4,8	2,5,6,7,10		1,4,6,8,11	1-10	1,3,6,7,10		2,5,7,8,11	5,6,7,8	1-10			1-10	2,5,6,7,10	
Operate Control Boards (2)		1,3,4,8	2,5,6,7,10		1,4,6,8,11		1,3,6,7,10		2,5,7,8,11	5,6,7,8					2,5,6,7,10	
Communicate and Interact	1-11	1,3,4,8	2,5,6,7,10		1,4,6,8,11	1-10	1,3,6,7,10		2,5,7,8,11	5,6,7,8	1-10			1-10	2,5,6,7,10	
Demonstrate Supervisory Ability (3)	1-11					1-10					1-10			1-10		
Comply with and Use TS (3)		3,5				2,3					4,6			2,3		
Notes: (1) Includes TS 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.) (Forms ES 303 1 and ES 303 3 describe the competency rating factors.)

Facility: Peach Bottom		Date of Examination: 2/25/2019				Operating Test No.: 2019 NRC										
Competencies	APPLICANTS															
	RO SRO-I 5 SRO-U	<input type="checkbox"/> X <input type="checkbox"/>	RO SRO-I 6 SRO-U	<input type="checkbox"/> X <input type="checkbox"/>	RO 1 SRO-I SRO-U	X <input type="checkbox"/> <input type="checkbox"/>	RO 2 SRO-I SRO-U	X <input type="checkbox"/> <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	1-11		1-10	2,3,6,7,9	1,4,6,8,11	1-10		1-10	1,4,6,8,11	1,3,4,8			2,5,7,8,11	5,6,7,8		
Comply with and Use Procedures (1)	1-11		1-10	2,3,6,7,9	1,4,6,8,11	1-10		1-10	1,4,6,8,11	1,3,4,8			2,5,7,8,11	5,6,7,8		
Operate Control Boards (2)				2,3,6,7,9	1,4,6,8,11				1,4,6,8,11	1,3,4,8			2,5,7,8,11	5,6,7,8		
Communicate and Interact	1-11		1-10	2,3,6,7,9	1,4,6,8,11	1-10		1-10	1,4,6,8,11	1,3,4,8			2,5,7,8,11	5,6,7,8		
Demonstrate Supervisory Ability (3)	1-11		1-10			1-10		1-10								
Comply with and Use TS (3)	3,5		4,6			2,3		4,5								
Notes:																
(1) Includes TS 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.) (Forms ES 303 1 and ES 303 3 describe the competency rating factors.)

Facility: Peach Bottom

Date of Examination: 2/25/2019

Operating Test No.: 2019 NRC

Competencies	APPLICANTS															
	RO 3 X				RO 4 X				RO 5 X				RO 6 X			
	SRO-I <input type="checkbox"/>				SRO-I <input type="checkbox"/>				SRO-I <input type="checkbox"/>				SRO-I <input type="checkbox"/>			
	SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <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	1,4,6,8,11	1,3,4,8	1,3,6,7,10		2,5,7,8,11	5,6,7,8			2,5,7,8,11	5,6,7,8	1,3,6,7,10			1,3,4,8	2,5,6,7,10	1,4,5,7,9
Comply with and Use Procedures (1)	1,4,6,8,11	1,3,4,8	1,3,6,7,10		2,5,7,8,11	5,6,7,8			2,5,7,8,11	5,6,7,8	1,3,6,7,10			1,3,4,8	2,5,6,7,10	1,4,5,7,9
Operate Control Boards (2)	1,4,6,8,11	1,3,4,8	1,3,6,7,10		2,5,7,8,11	5,6,7,8			2,5,7,8,11	5,6,7,8	1,3,6,7,10			1,3,4,8	2,5,6,7,10	1,4,5,7,9
Communicate and Interact	1,4,6,8,11	1,3,4,8	1,3,6,7,10		2,5,7,8,11	5,6,7,8			2,5,7,8,11	5,6,7,8	1,3,6,7,10			1,3,4,8	2,5,6,7,10	1,4,5,7,9
Demonstrate Supervisory Ability (3)																
Comply with and Use TS (3)																

Notes:

- (1) Includes TS 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.) (Forms ES 303 1 and ES 303 3 describe the competency rating factors.)

Facility: <i>Peach Bottom</i>		Date of Exam: <i>3/7/19</i> Exam Level: RO <input checked="" type="checkbox"/> SRO <input type="checkbox"/>		
Item Description	Initials			
	a	b	c	
1. Clean answer sheets copied before grading	<i>crf</i>	<i>✓</i>	<i>TF</i>	
2. Proposed answer key changes and question deletions justified and documented (facility reviewer initials not required (N/R) if NO post-examination comments are submitted)	<i>crf</i>	<i>✓</i>	<i>TF</i>	
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<i>crf</i>	<i>W</i>	<i>TF</i>	
4. Grading for all borderline cases (80% ±2% overall and 70% or 80%, as applicable, ±4% on the SRO-only exam) reviewed in detail	<i>crf</i>	<i>W</i>	<i>TF</i>	
5. All other failing examinations checked to ensure that grades are justified	<i>crf</i>	<i>W</i>	<i>TF</i>	
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by one-half or more of the applicants	<i>crf</i>	<i>W</i>	<i>TF</i>	
Printed Name/Signature		Date		
a. Grader	<i>Christopher Ferrara</i>	<i>3/19/19</i>		
b. Facility Reviewer(*)	<i>Craig Wachter</i>	<i>3/21/19</i>		
c. NRC Chief Examiner (*)	<i>Todd Fish</i>	<i>4/5/19</i>		
d. NRC Supervisor (*)	<i>Donald Jackson</i>	<i>4/16/19</i>		
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.				

Facility: <i>Peach Bottom</i>		Date of Exam: <i>3/7/19</i>		Exam Level: RO <input type="checkbox"/> SRO <input checked="" type="checkbox"/>	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	<i>crf</i>	<i>✓</i>	<i>TF</i>		
2. Proposed answer key changes and question deletions justified and documented (facility reviewer initials not required (N/R) if NO post-examination comments are submitted)	<i>crf</i>	<i>W</i>	<i>TF</i>		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<i>crf</i>	<i>W</i>	<i>TF</i>		
4. Grading for all borderline cases (80% ±2% overall and 70% or 80%, as applicable, ±4% on the SRO-only exam) reviewed in detail	<i>crf</i>	<i>W</i>	<i>TF</i>		
5. All other failing examinations checked to ensure that grades are justified	<i>crf</i>	<i>W</i>	<i>TF</i>		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by one-half or more of the applicants	<i>crf</i>	<i>W</i>	<i>TF</i>		
Printed Name/Signature		Date			
a. Grader	<i>Christopher Ferraro</i>		<i>3/19/19</i>		
b. Facility Reviewer(*)	<i>Chris Weichman</i>		<i>3/20/19</i>		
c. NRC Chief Examiner (*)	<i>TODD FISH / J Fish</i>		<i>4/5/19</i>		
d. NRC Supervisor (*)	<i>DONALD JACKSON</i>		<i>4/16/19</i>		
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					