Facility: CALVERT CLIFFS Date of Examination: 8/6 - 8/16 2018

Developed by: Written: Facility [X] NRC [ ] // Operating Facility [X] NRC [ ]

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).	
-210	2. NRC examiners and facility contact assigned (C.1.d; C.2.f).	
-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).	
-210	4. Reference material due for NRC-prepared exams (C.1.e; C.3.c; Attachment 3).	
-210	5. Corporate notification letter sent (C.2.e).	
-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).	
-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).	
-136	8. Operating test outline(s) reviewed by the NRC and feedback provided to facility licensee (C.2.h; C.3.d–e).	
-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).	
-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).	
-60	11. Preliminary waiver/excusal requests due (C.1.m; C.2.c; ES-202).	
-50	12. Written exam and operating test reviews completed (C.3.f).	
-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.	
-30	14. Preliminary license applications and waiver/excusal requests, as applicable (NRC Form 398) due (C.1.m; C.2.i; ES-202).	
-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).	
-7	16. Written examinations and operating tests approved by the NRC supervisor (C.2.j–k; C.3.h).	
-7	17. Request facility licensee management feedback on the examination (C.2.l).	
-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).	
-7	19. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k).	
-7	20. Approved scenarios and job performance measures distributed to NRC examiners (C.3.i).	

* 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.

Facility: CALVERT CLIFFS NUCLEAR POWER PLANT Date of Examination: 8/6/2018

Item	Task Description	Initials a	b*	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.			
	c. Assess whether the outline overemphasizes any systems, evolutions, or generic topics.			
	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.			
	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) conforms with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D and in Section D.5, "Specific Instructions for the 'Simulator Operating Test,'" of ES-301 (including overlap).			
3. WALKTHROUGH	a. Verify that the systems walkthrough outline meets the criteria specified on Form ES-301-2: (1) The outline(s) contains 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 applicant's 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 radiologically controlled area tasks meets the criteria on the form.			
	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 whether 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 probabilistic risk assessment and individual plant examination insights) are covered in the appropriate exam sections.			
	b. Assess whether the 10 CFR 55.41, 55.43, and 55.45 sampling is appropriate.			
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.			
	d. Check for duplication and overlap among exam sections and the last two NRC exams.			
	e. Check the entire exam for balance of coverage.			
	f. Assess whether the exam fits the appropriate job level (RO or SRO).			

	Printed Name/Signature	Date
a. Author	JOE JAEGER	2/28/18
b. Facility Reviewer (*)	ROBERTO GINES	2/28/18
c. NRC's Chief Examiner (#)	J. D'ANTONIO	5/24/18
d. NRC Supervisor	D.E. Jackson	7/24/18

* Not applicable for NRC-prepared examination outlines.

The independent NRC reviewer initials items in column "c"; the chief examiner's concurrence is required.

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 8/6/18, 8/13/18 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 8/6/18, 8/13/18. 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.	JP JAEGER	FACILITY AUTHOR		1/1/18		8/21/18	
2.	Kevin Swiger	Exam Author		11/6/17		8/21/18	
3.	James Ba-tin	Exam Author		11/6/17		8/21/18	
4.	PAM JONES	DBA (DATA BASE ADMIN)		12/4/17		8/27/18	
5.	DAVE MONAHAN	OPS TRNG PROG SPEC.		1/30/18	PER TELCON	8/27/18	
6.	James T. Huber	Technical Reviewer		2/6/18		8/22/18	
7.	Roberto GINES	FACILITY REP		2/15/18		8/30/18	
8.	Richard Nuhfer	Exam Validation		3/26/18		8/27/18	
9.	BRENDAN FESTER	EXAM VALIDATION		3/26/18		8/27/18	
10.	GARRETT BLUE	EXAM VALIDATION		3/27/18		8/27/18	
11.	COREY DONAHOO	EXAM VALIDATION		3/27/18		8/27/18	
12.	CHRIS CONOVER	EXAM VALIDATION		4/3/18		8/27/18	
13.	John Phillippi	Exam Validation		4/3/18		8/27/18	
14.	MICHAEL D. WHITE	EXAM VALIDATION		4-3-18		8-23-18	
15.	Keith W. Swiger	Exam Validation		4-3-18		8-23-18	

NOTES:

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 8/6/18, 8/13/18 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 8/6/18, 8/13/18 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.	PATRICK S O'DONNELL	VALIDATOR		5/15/18		8/20/18	
2.	DAVID SUPANICH	VALIDATOR		5/15/18		8/20/18	
3.	BRIAN FOVEAUX	VALIDATOR		5/17/18		8/27/18	
4.	MEGAN PALLETT	FACILITY REP		6/14/18		8/22/18	
5.	Michael Saul	Validator		7/9/18		8/22/18	
6.	Gregg Buckmaster	Validator		7/10/18		8/27/18	
7.	Ben Ridgely	Validator		7/10/18		8/27/18	
8.	JOHN HAYDEN	SIM SUPPORT		7/23/18		8/22/18	
9.	DANIEL SLOAN	VALIDATOR		7/23/18		8/27/18	
10.	JULIENNE McELROY	SIM SUPPORT		7/24/18		8/24/18	
11.	Jeremy Hansen	Sim Software		7/24/18		8/22/18	
12.	ALEX [illegible]	OPS Training Mgt		8/6/18		8/22/18	
13.	DAVID TURNER	OPS Management		8/6/18	DER TELGIN	8/28/18	
14.	MIKE MILLBRANDT	Training Management		8/7/18		8/24/18	
15.	RON MCCOOL II	PROCTOR		8/9/18		8/27/18	

NOTES:

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August 2018

Facility: **Calvert Cliffs Nuclear Power Plant** Date of Examination: **August 6, 2018** Operating Test Number: **2018**

1. General Criteria	Initials a	Initials b*	Initials 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).			
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	J.P. JAEGER	5/16/18
b. Facility Reviewer(*)	R. GINES	5/17/18
c. NRC Chief Examiner(#)	J. D'ANTONIO	7/16/18
d. NRC Supervisor	D.E. Jackson	7/24/18

* The facility signature is not applicable for NRC-developed tests.

\# The independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.

Facility: **CCNPP** Date of Exam: **8/6/2018** Scenario Numbers: **1 / 2 / 3 / 4** Operating Test #: **2018**

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. Scenarios are new or significantly modified 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. Applicants are evaluated on a similar number of preidentified critical tasks across scenarios, when possible.			
14. 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) — 2 / 2 / 2 / 3			
2. Abnormal events (2–4) — 3 / 2 / 4 / 3			
3. Major transients (1–2) — 1 / 1 / 1 / 1			
4. EOPs entered/requiring substantive actions (1–2) — 1 / 1 / 1 / 1			
5. Entry into a contingency EOP with substantive actions (≥ 1 per scenario set) — 1 / 0 / 1 / 0			
6. Preidentified critical tasks (≥ 2) — 2 / 2 / 3 / 2			

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

Facility: **CCNPP** Date of Exam: **8/6/2018** Operating Test #: **2018**

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
Scenario Rollup	RX		4			3			1			4			1	1	0
	NOR	1		1	1		1	1		1	1		1		1	1	1
	I/C	2,3 4,5	2,5 6	3,4 8	3,4 6	2,4 5	3,4 6	3,4 5,6,7	2,5 7,9	3,5 6	2,3 4,5	2,5 6	3,4 8		4	4	2
	MAJ	7	7	7	7	7	7	8	8	8	7	7	7		2	2	1
	TS	4,5			5,6			2,3,5			1,2				0	2	2
RO-1	RX					3								**1**	1	1	0
	NOR			1										**1**	1	1	1
	I/C			3,4 8		2,4 5								**6**	4	4	2
	MAJ			7		7								**2**	2	2	1
	TS													**0**	0	2	2
RO-2	RX					3								**1**	1	1	0
	NOR			1										**1**	1	1	1
	I/C			3,4 8		2,4 5								**6**	4	4	2
	MAJ			7		7								**2**	2	2	1
	TS													**0**	0	2	2
RO-3	RX								1					**1**	1	1	0
	NOR			1										**1**	1	1	1
	I/C			3,4 8					2,5 7,9					**7**	4	4	2
	MAJ			7					8					**2**	2	2	1
	TS													**0**	0	2	2
RO-4	RX								1					**1**	1	1	0
	NOR			1										**1**	1	1	1
	I/C			3,4 8					2,5 7,9					**7**	4	4	2
	MAJ			7					8					**2**	2	2	1
	TS													**0**	0	2	2
RO-5	RX		4											**1**	1	1	0
	NOR									1				**1**	1	1	1
	I/C		2,5 6							3,5 6				**6**	4	4	2
	MAJ		7							8				**2**	2	2	1
	TS													**0**	0	2	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
Scenario Rollup	RX		4			3			1			4			1	1	0
	NOR	1		1	1		1	1		1	1		1		1	1	1
	I/C	2,4 5	2,5 6	3,4 8	3,4 6	2,4 5	3,4 6	3,4 5,6,7	2,5 7,9	3,5 6	2,3 4,5	2,5 6	3,4 8		4	4	2
	MAJ	7	7	7	7	7	7	8	8	8	7	7	7		2	2	1
	TS	4,6			5,6			2,3,5			1,2				0	2	2
SROI-1	RX		4											**1**	1	1	0
	NOR							1						**1**	1	1	1
	I/C		2,5 6					3,4 5,6,7						**8**	4	4	2
	MAJ		7					8						**2**	2	2	1
	TS							2,3,5						**3**	0	2	2
SROI-2	RX		4											**1**	1	1	0
	NOR							1						**1**	1	1	1
	I/C		2,5 6					3,4 5,6,7						**8**	4	4	2
	MAJ		7					8						**2**	2	2	1
	TS							2,3,5						**3**	0	2	2
SROI-3	RX		4											**1**	1	1	0
	NOR							1						**1**	1	1	1
	I/C		2,5 6					3,4 5,6,7						**8**	4	4	2
	MAJ		7					8						**2**	2	2	1
	TS							2,3,5						**3**	0	2	2
SROI-4	RX								1					**1**	1	1	0
	NOR	1												**1**	1	1	1
	I/C	2,4 5							2,5 7,9					**7**	4	4	2
	MAJ	7							8					**2**	2	2	1
	TS	4,6												**2**	0	2	2
SROI-5	RX								1					**1**	1	1	0
	NOR	1												**1**	1	1	1
	I/C	2,4 5							2,5 7,9					**7**	4	4	2
	MAJ	7							8					**2**	2	2	1
	TS	4,6												**2**	0	2	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
Scenario Rollup	RX		4			3			1			4			1	1	0
	NOR	1		1	1		1	1		1	1		1		1	1	1
	I/C	2,4 5	2,5 6	3,4 8	3,4 6	2,4 5	3,4 6	3,4 5,6,7	2,5 7,9	3,5 6	2,3 4,5	2,5 6	3,4 8		4	4	2
	MAJ	7	7	7	7	7	7	8	8	8	7	7	7		2	2	1
	TS	4,6			5,6			2,3,5			1,2				0	2	2
SROU-1	RX													**0**	1	1	0
	NOR	1												**1**	1	1	1
	I/C	2,4 5												**3**	4	4	2
	MAJ	7												**1**	2	2	1
	TS	4,6												**2**	0	2	2
SROU-2	RX													**0**	1	1	0
	NOR	1												**1**	1	1	1
	I/C	2,4 5												**3**	4	4	2
	MAJ	7												**1**	2	2	1
	TS	4,6												**2**	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 1-for-1 basis.
3. Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirements specified for the applicant's license level in the right-hand columns.
4. 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: **CCNPP** Date of Exam: **8/6/2018** Operating Test #: **2018**

Competencies	APPLICANTS															
	☒ **RO/ATC** ☐ BOP ☐ SRO-I ☐ SRO-U				☐ RO/ATC ☒ **BOP** ☐ SRO-I ☐ SRO-U				☐ RO/ATC ☐ BOP ☒ **SRO-I** ☐ SRO-U				☐ RO/ATC ☐ BOP ☐ SRO-I ☒ **SRO-U**			
	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	2,4 5,6 7	2,3 4.5 7	1,2 5,7 8,9	2,4 5,6 7	1,3 4,7 8	1,3 4,6 7	1,3 5,6 8	1,3 4,7 8	1-8	1-7	1-9	1-8	1-8	1-7	1-9	1-8
Comply With and Use Procedures (1)	2,4 5,6 7	2,3 4.5 7	1,2 5,7 8,9	2,4 5,6 7	1,3 4,7 8	1,3 4,6 7	1,3 5,6 8	1,3 4,7 8	1-8	1-7	1-9	1-8	1-8	1-7	1-9	1-8
Operate Control Boards (2)	2,4 5,6 7	2,3 4.5 7	1,2 5,7 8,9	2,4 5,6 7	1,3 4,7 8	1,3 4,6 7	1,3 5,6 8	1,3 4,7 8	-	-	-	-	-	-	-	-
Communicate and Interact	2,4 5,6 7	2,3 4.5 7	1,2 5,7 8,9	2,4 5,6 7	1,3 4,7 8	1,3 4,6 7	1,3 5,6 8	1,3 4,7 8	1-8	1-7	1-9	1-8	1-8	1-7	1-9	1-8
Demonstrate Supervisory Ability (3)	-	-	-	-	-	-	-	-	1-8	1-7	1-9	1-8	1-8	1-7	1-9	1-8
Comply With and Use Tech Specs (3)	-	-	-	-	-	-	-	-	4,5	5,6	2,3 5	1,2	4,5	5,6	2,3 5	1,2

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 are described on forms ES-303-1 and ES303-3.)

Facility:													Exam Date:
Admin SRO	JPMs RO	1 ADMIN Topic and K/A	2 LOD (1-5)	3 Attributes I/C Focus	Cues	Critical Steps	Scope (N/B)	Overlap	Perf. Std.	Key	4 Job Content Minutia	Job Link	5 U/E/S	6 Explanation
1	1		3-3										S-S	REFERENCE OI-22P (SRO)
2	2		3-3										S-S	PROVIDE TOLERANCES (SRO)
3	3		3-3										S-S	
4	4		2-2										S-S	
5			2										S-S	
Simulator/In-Plant JPMs		1 Safety Function and K/A												
P1			3										S	CUE PLG, CLARIFY TREND
P2			3										S	
P3			3										S	
S1			3											
S2			3											
S3			4											NO FLAGGING. EXAMINER CUE
S4			3											NO BACK PANEL CHECKS REQ
S5			3											
S6			3											
S7			3											
S8			4											

Instructions for Completing This Table:

Check or mark any item(s) requiring a comment and explain the issue in the space provided using the guide below.

1. Check each JPM for appropriate administrative topic requirements (COO, EC, Rad, and EP) or safety function requirements and corresponding K/A. Mark in column 1. (ES-301, D.3 and D.4)

2. Determine the level of difficulty (LOD) using an established 1–5 rating scale. Levels 1 and 5 represent an inappropriate (low or high) discriminatory level for the license that is being tested. Mark in column 2 (Appendix D, C.1.f)

3. In column 3, "Attributes," check the appropriate box when an attribute is **not met**:
   - The initial conditions and/or initiating cue is clear to ensure the operator understands the task and how to begin. (Appendix C, B.4)
   - The JPM contains appropriate cues that clearly indicate when they should be provided to the examinee. Cues are objective and not leading. (Appendix C, D.1)
   - All critical steps (elements) are properly identified.
   - The scope of the task is not too narrow (N) or too broad (B).
   - Excessive overlap does not occur with other parts of the operating test or written examination. (ES-301, D.1.a, and ES-301, D.2.a)
   - The task performance standard clearly describes the expected outcome (i.e., end state). Each performance step identifies a standard for successful completion of the step.
   - A valid marked up key was provided (e.g., graph interpretation, initialed steps for handouts).

4. For column 4, "Job Content," check the appropriate box if the job content flaw **does not meet** the following elements:
   - Topics are linked to the job content (e.g., not a disguised task, task required in real job).
   - The JPM has meaningful performance requirements that will provide a legitimate basis for evaluating the applicant's understanding and ability to safely operate the plant. (ES-301, D.2.c)

5. Based on the reviewer's judgment, is the JPM as written (U)nacceptable (requiring repair or replacement), in need of (E)nhancement, or (S)atisfactory? Mark the answer in column 5.

6. In column 6, provide a brief description of any (U)nacceptable or (E)nhancement rating from column 5.

Save initial review comments and detail subsequent comment resolution so that each exam-bound JPM is marked by a (S)atisfactory resolution on this form.

Facility:						Scenario: /			Exam Date:
1 Event	2 Realism/Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scen. Overlap	9 U/E/S	10 Explanation
1								S	
2								S	
3								S	
4					✓			S	
5					✓	✓		S	
6								S	
7						✓	✓	S	
8								S	

Facility:						Scenario: 2			Exam Date:
1 Event	2 Realism/Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scen. Overlap	9 U/E/S	10 Explanation
1								S	
2								S	
3								S	
4								S	
5					✓			S	
6					✓	✓		S	
7						✓	✓	E	REWORK CTS FOR CLARITY

Facility:						Scenario: 3			Exam Date:
1 Event	2 Realism/Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scen. Overlap	9 U/E/S	10 Explanation: Start at 100% Note > 5% ↓ Pwr
1								S	
2					✓			S	
3					✓			S	
4								S	
5								S	
6						✓		S	
7						✓		S	
8						✓		S	
9							✓	S	

ES-301 **Operating Test Review Worksheet** **Form ES-301-7**

Facility: **Scenario:** 4 (SPARE) **Exam Date:**

1 Event	2 Realism/Cred.	3 Required Actions	4 Verifiable actions	5 LOD	6 TS	7 CTs	8 Scen. Overlap	9 U/E/S	10 Explanation
1					✓			S	
2					✓		✓	S	
3								S	
4								E	NO FEED CALL
5								S	
6						✓	✓	E	SPEED UP DIAGNOSIS
7						✓	✓	S	
8									

Instructions for Completing This Table:

Use this table for each scenario for evaluation.

2 Check this box if the events are not related (e.g., seismic event followed by a pipe rupture) **OR** if the events do not obey the laws of physics and thermodynamics.

3, 4 In columns 3 and 4, check the box if there is **no** verifiable or required action, as applicable. Examples of required actions are as follows: (ES-301, D.5f)

- opening, closing, and throttling valves
- starting and stopping equipment
- raising and lowering level, flow, and pressure
- making decisions and giving directions
- acknowledging or verifying key alarms and automatic actions (Uncomplicated events that require no operator action beyond this should **not** be included on the operating test unless they are necessary to set the stage for subsequent events. (Appendix D, B.3).)

5 Check this box if the level of difficulty is **not** appropriate.

6 Check this box if the event has a TS.

7 Check this box if the event has a critical task (CT). If the same CT covers more than one event, check the event where the CT started **only.**

8 Check this box if the event overlaps with another event on any of the last two NRC examinations. (Appendix D, C.1.f)

9 Based on the reviewer's judgment, is the event as written (U)nacceptable (requiring repair or replacement), in need of (E)nhancement, or (S)atisfactory? Mark the answer in column 9.

10 Record any explanations of the events here.

In the shaded boxes, sum the number of check marks in each column.

- In column 1, sum the number of events.
- In columns 2–4, record the total number of check marks for each column.
- In column 5, based on the reviewer's judgement, place a checkmark only if the scenario's LOD is not appropriate.
- In column 6, TS are required to be ≥ 2 for each scenario. (ES-301, D.5.d)
- In column 7, preidentified CTs should be ≥ 2 for each scenario. (Appendix D; ES-301, D.5.d; ES-301-4)
- In column 8, record the number of events not used on the two previous NRC initial licensing exams. A scenario is considered unsatisfactory if there is < 2 new events. (ES-301, D.5.b; Appendix D, C.1.f)
- In column 9, record whether the scenario as written (U)nacceptable, in need of (E)nhancement, or (S)atisfactory from column 11 of the simulator scenario table.

Facility:									Exam Date:
Scenario	1 Event Totals	2 Events Unsat.	3 TS Total	4 TS Unsat.	5 CT Total	6 CT Unsat.	7 % Unsat. Scenario Elements	8 U/E/S	11 Explanation
1	8	0	2	0	2	0	0	S	
2	7	0	2	0	2	0	0	E	MODIFY CTS
3	9	0	2	0	3	0	0	E	↑ RX MANIP
4	8	0	2	0	2	0	0	E	NO FIELD CUE, SPEED DIAGNOSIS

Instructions for Completing This Table:

Check or mark any item(s) requiring comment and explain the issue in the space provided.

1, 3, 5 For each simulator scenario, enter the **total** number of events (column 1), TS entries/actions (column 3), and CTs (column 5). This number should match the respective scenario from the event-based scenario tables (the sum from columns 1, 6, and 7, respectively).

2, 4, 6 For each simulator scenario, evaluate each event, TS, and CT as (S)atisfactory, (E)nhance, or (U)nsatisfactory based on the following criteria:

a. Events. Each event is described on a Form ES-D-2, including all switch manipulations, pertinent alarms, and verifiable actions. Event actions are balanced between at-the-controls and balance-of-plant applicants during the scenario. All event-related attributes on Form ES-301-4 are met. Enter the total number of unsatisfactory events in column 2.

b. TS. A scenario includes at least two TS entries/actions across at least two different events. TS entries and actions are detailed on Form ES-D-2. Enter the total number of unsatisfactory TS entries/actions in column 4. (ES-301, D.5d)

c. CT. Check that a scenario includes at least two preidentified CTs. This criterion is a target quantitative attribute, not an absolute minimum requirement. Check that each CT is explicitly bounded on Form ES-D-2 with measurable performance standards (see Appendix D). Enter the total number of unsatisfactory CTs in column 6.

7 In column 7, calculate the percentage of unsatisfactory scenario elements: $\left(\frac{2+4+6}{1+3+5}\right)100\%$

8 If the value in column 7 is > 20%, mark the scenario as (U)nsatisfactory in column 8. If column 7 is ≤ 20%, annotate with (E)nhancement or (S)atisfactory.

9 In column 9, explain each unsatisfactory event, TS, and CT. Editorial comments can also be added here.

Save initial review comments and detail subsequent comment resolution so that each exam-bound scenario is marked by a (S)atisfactory resolution on this form.

ite name: Exam Date:

OPERATING TEST TOTALS

	Total	Total Unsat.	Total Edits	Total Sat.	% Unsat.	Explanation
Admin. JPMs	9	0	2	9		
Sim./In-Plant JPMs	11	0	3	11		
Scenarios	4	0	3	4		
Op. Test Totals:	24	0	8	24	0	

Instructions for Completing This Table:

Update data for this table from quality reviews and totals in the previous tables and then calculate the percentage of total items that are unsatisfactory and give an explanation in the space provided.

1. Enter the total number of items submitted for the operating test in the "Total" column. For example, if nine administrative JPMs were submitted, enter "9" in the "Total" items column for administrative JPMs. For scenarios, enter the total number of simulator scenarios.

2. Enter the total number of (U)nsatisfactory JPMs and scenarios from the two JPMs column 5 and simulator scenarios column 8 in the previous tables. Provide an explanation in the space provided.

3. Enter totals for (E)nhancements needed and (S)atisfactory JPMs and scenarios from the previous tables. This task is for tracking only.

4. Total each column and enter the amounts in the "Op. Test Totals" row.

5. Calculate the percentage of the operating test that is (U)nsatisfactory (Op. Test Total Unsat.)/(Op. Test Total) and place this value in the bolded "% Unsat." cell.

   Refer to ES-501, E.3.a, to rate the overall operating test as follows:
   - satisfactory, if the "Op. Test Total" "% Unsat." is ≤ 20%
   - unsatisfactory, if "Op. Test Total" "% Unsat." is > 20%

6. Update this table and the tables above with post-exam changes if the "as-administered" operating test required content changes, including the following:
   - The JPM performance standards were incorrect.
   - The administrative JPM tasks/keys were incorrect.
   - CTs were incorrect in the scenarios (not including postscenario critical tasks defined in Appendix D).
   - The EOP strategy was incorrect in a scenario(s).
   - TS entries/actions were determined to be incorrect in a scenario(s).

Facility: CALVERT CLIFFS Date of Exam: 8/17/18 Exam Level: RO X SRO X

Item Description		Initials a	Initials b	Initials c
1.	Clean answer sheets copied before grading			
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)	NONE	N/R	N/A
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)			
4.	Grading for all borderline cases (80% ±2% overall and 70% or 80%, as applicable, ±4% on the SRO-only exam) reviewed in detail			
5.	All other failing examinations checked to ensure that grades are justified			
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			

	Printed Name/Signature	Date
a. Grader	JP JAEGER	8/29/18
b. Facility Reviewer(*)	Kevin Swiger Kevin W. Swiger	8/29/18
c. NRC Chief Examiner (*)	J. D'ANTONIO	9/19/18
d. NRC Supervisor (*)	D.E. Jackson	9/20/18

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