ES-301 **Simulator Scenario Quality Checklist** **Form ES-301-4**

Facility: **OCONEE** Date of Exam: **05/02/11** Scenario Numbers: 1 / 2 / 3 Operating Test No.: **1**

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.			
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) 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. 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.			
5. The events are valid with regard to physics and thermodynamics.			
6. Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
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.			
8. The simulator modeling is not altered.			
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.			
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.			
11. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			
12. Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).			
13. The level of difficulty is appropriate to support licensing decisions for each crew position.			

	Target Quantitative Attributes (Per Scenario; See Section D.5.d)	Actual Attributes	–	–	–
1.	Total malfunctions (5–8)	8 / 7 / 8			
2.	Malfunctions after EOP entry (1–2)	2 / 2 / 2			
3.	Abnormal events (2–4)	3 / 2 / 3			
4.	Major transients (1–2)	1 / 1 / 2			
5.	EOPs entered/requiring substantive actions (1–2)	1 / 2 / 3			
6.	EOP contingencies requiring substantive actions (0–2)	1 / 1 / 2			
7.	Critical tasks (2–3)	5 / 4 / 3			

Facility: OCONEE Date of Examination: MAY 2011

Developed by: Written - Facility [x] NRC [ ] // Operating - Facility [x] NRC [ ]

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	MB
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	MB
-120	3. Facility contact briefed on security and other requirements (C.2.c)	MB
-120	4. Corporate notification letter sent (C.2.d)	MB
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 3)]	MB
{-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)	MB
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	MB
{-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)	MB
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.l; C.2.g; ES-202)	MB
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.l; C.2.i; ES-202)	
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	OP: MB Wr: MB
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	MB
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	OP: MB Wr: MB
-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)	MB
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	MB
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	MB

* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.
[Applies only] {Does not apply} to examinations prepared by the NRC.

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

Facility: **OCONEE** Date of Examination: **05/02/11**

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

	Printed Name/Signature	Date
a. Author	Gabriel WASHBURN / Gabriel Wa	4-22-11
b. Facility Reviewer (*)	John R Steely / John R Steely	4-22-11
c. NRC Chief Examiner (#)	MARK A. BATES / Mark A. Bates	04-26-11
d. NRC Supervisor	MALCOLM T. WIDMANN / Malcolm T. Widmann	04/27/11

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

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

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of **05/02/2011** as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of **05/02/2011**. 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.	Clifford P. Witherspoon	Exam Author		11-4-10		5-13-11	
2.	Gabriel WASHBURN	EXAM AUTHOR		11-4-10		5-13-11	
3.	FREDRIC COWN	VENDER		11-4-10	*	6/6/11	
4.	Paul M. STOVALL	COE OTM		11-2-10		5-17-11	
5.	Rick Robinson	OPS		12-14-10		5-24-11	
6.	Stephen Scott Bowen	Instructor		1-14-11		5-16-11	
7.	Olson Kawiecki and Mercado	OPS Instructor		1-7-11		5-16-11	
8.	John R Steely	Ops Trng Mgr / Fac. Rep.		1-21-11		5-16-11	
9.	Jeff G. Pottmeyer	OPS TRAINING		1/24/11		5/16/11	
10.	William C Rostron	OPS TRAINING		1/24/11		5/16/11	
11.	JAMES M. BYKO	OPS TRAINING SIM SUPPORT		1/24/11		5/16/11	
12.	Joey Woolbright	Sim Support		1/28/11		5-16-11	
13.	KEITH P WELCHEL	Sim Support Supvr.		1/28/11		5-16-11	
14.	TAM Van VO	Sim support		1-28-11		5-16-11	
15.	Gillespie BEN	JPM		2-5-11	*	6-6-11	

NOTES:

* via phone call

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of **05/02/2011** as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of **05/02/2011**. 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.	Chris Judd	RO		2-5-11		5-16-11	
2.	Jeremy Galloway	SRO		2-7-11		5-16-11	
3.	Clark Fletcher	MNS Exam Writer		2-7-11	*Clark Fletcher	6-6-11	
4.	Wiley Killette	MNS OPS TRNG Supv		2/7/11	*Wiley Killette	6-6-11	
5.	FRED KIRK	MNS OPS TRAINING		2/7/11	Deceased		
6.	Chad T. Morgan	RO		2-12-11		5-17-11	
7.	Betsy Santos-Lozada	RO		2-12-11		5-17-11	
8.	William Hank Stephens	SRO		02-12-11		05-16-11	
9.	Kenneth Comte	Exam writer		02-16-11		5-16-11	
10.	Dean Hubbard	Training Manager		02-16-11		5-18-11	
11.	Dean Porter	OSNI		2-17-11		6/2/11	
12.	John Supples	COE		2/21/11		5/24/11	
13.	Robert Mc Timms	SRO		2/22/11		5-16-11	
14.	Eric Madsen	CNS Exam Team		2/24/11	Eric Madsen	6-9-11	
15.	Darrell Hensley	CNS Peer Review		2/24/11	Darrell Hensley	6-7-11	

NOTES: * Via Phone Call

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of **05/02/2011** as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of **05/02/2011**. 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.	PAUL MARSHALL	SRO		3/3/11		5/31/11	
2.	Ryan Plum	SRO		3/3/11		5-19-11	
3.	Ben McCall	RO		3-3-11		5-18-11	
4.	Shyun Jackson	RO		3-3-11		6-7-11	
5.	Robert LaMance	RO		3-4-11		5-19-11	
6.	David Nix	SRO		3-4-11		5/19/11	
7.	Tracy Roland	SRO		3-5-11		5-17-11	
8.	Matt Admir	RO		3-5-11		5/19/11	
9.	Chris Jenkins	NEU		3-5-11		5-16-11	
10.	Robert Wilks	SRO		3-6-11		5/16/11	
11.	Stan Pressley	SRO		3-16-11		5/17/11	
12.	Scot Hawkesworth	RO		3/17/11		5/19/11	
13.	DANIEL WILSON	RO		3-17-11		5-16-11	
14.	MIKE TATE	SRO		3-28-11		5-16-11	
15.	DANIEL GEORGE	RO		3-30-11		6-7-11	

NOTES:

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

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of **05/02/2011** as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of **05/02/2011**. 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.	John Sawyer	SRO		4-6-11		5-17-11
2.	ROBERT SHAW	RO		4-6-11		6/2/11
3.	MARK CARROLL	JRO		4-8-11		5-18-11
4.	RB Poole	SRO		4-11-11		5-17-11
5.	Patrick Gadsby	RO		4-11-11		5-14-11
6.	Tony Lee	OPS TRAINING LIAISON		4-12-11		5-17-11
7.	Mike Quarles	RP Temp. Supervisor		4-13-11		5-16-11
8.	Jay Ratliff	SRO		4-19-11		5-16-11
9.	Ed Burchfield	OPS Superintendent		4-22-11		5-20-11
10.	Kevin Cooley	RO		4-24-11		5-26-11
11.	Lisa Abernathy	Admin Support		4/26/11		5/16/11
12.	ERIC LAMER	DNS RP SUPERVISING SCIENTIST		04/26/11		5/17/11
13.	FLINT BALDWIN	OSM/INITIAL TRAINING		4-27-11		5-13-11
14.	Boyd Shingleton	Reg. Comp. Eng.		4-27-11		5-17-11
15.	AARON SMITH	SRO		4-27-11		5-17-11

NOTES:

40+5

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of **05/02/2011** as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of **05/02/2011**. 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.	ROBIN LANE	SRO INSTRUCTOR		4-28-11		5/16/11
2.	DENNIS PARHAM	MAINT TEC		4/28/11		5-17-11
3.	John L. Collins Jr.	SOM		4/28/11		5-17-11
4.	SAM LARK	INITIAL TRNG SUPERVISOR		4/28/11		6/1/11
5.	John Ashcraft	INSTRUCTOR		4/29/11		5/16/11
6.	THEODORE A. LOE	INSTRUCTOR		4/29/11		5/18/11
7.	Michael Smith	SRO Instructor		4/29/11		5/16/11
8.	LARRY A. HAWKINS	RO		5/5/11		5/23/11
9.	THANNER T. BREWER	RO		5/11/11		5/19/11
10.	Daniel E. Strawberman	SRO		5/11/11		5/14/11
11.	R. Derick Durham	RO		5/11/11		5/20/11
12.	CHAD L. SMITH	RO		5/11/11		5-16-11
13.	JAMES M HENDRON	RO		5/12/11		5/16/11
5-19-11	~~14. Ryan Plaza~~	~~SRO~~				
15.						

NOTES:

Facility: **Oconee**		Date of Examination: **May, 2011**
Examination Level: RO [X] SRO [ ]		Operating Test Number: **1**
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations [KA G2.1.25 (3.9/4.2)] (13 min)	D, R	**ADMIN-112 Calculate Requirements To Makeup To BWST** Both
Conduct of Operations [KA G2.1.43 (4.1/4.3)] (15 min)	N, R	**ADMIN-125 CALCULATE SHUTDOWN MARGIN (MANUAL CALCULATION)** RO only
Equipment Control [KA G2.2.14 (3.9/4.3)] (30 min)	M, R	**ADMIN-212 Determine LTOP Requirements** RO only
Radiation Control [KA G2.3.4 (3.2/3.7)] (20 min)	M, R	**ADMIN-305 Calculate the Maximum Permissible Stay Time Within Emergency Dose Limits (EDLs)** Both

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:
(C)ontrol room, (S)imulator, or Class(R)oom
(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)

Facility: **Oconee** Date of Examination: **May, 2011**

Examination Level: RO ☐ SRO ☒ Operating Test Number: **1**

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations [KA G2.1.25 (3.9/4.2)] (13 min)	D, R	**ADMIN-112 Calculate Requirements To Makeup To BWST** Both
Conduct of Operations [KA G2.1.4 (3.3/3.8)] (15 min)	M, R	**ADMIN-124 Determine Minimum Shift Staffing Requirements** SRO only
Equipment Control [KA G2.2.40 (3.4/4.7)] (15 min)	N, R	**ADMIN-215 Determine Tech Spec requirements for inoperable Pzr Heaters** SRO only
Radiation Control [KA G2.3.4 (3.2/3.7)] (20 min)	M, R	**ADMIN-305 Calculate the Maximum Permissible Stay Time Within Emergency Dose Limits (EDLs)** Both
Emergency Plan [KA G2.4.38 (2.4/4.4)] (20 min)	D, R	**ADMIN-409 Determine Emergency Classification and Protective Action Recommendations** SRO only

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:
(C)ontrol room, (S)imulator, or Class(R)oom
(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)

Facility: **Oconee**	Date of Examination: **May, 2011**
Exam Level: **RO** [X] SRO-I [ ] SRO-U [ ]	Operating Test No.: **1**

Control Room Systems@ (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)

System / JPM Title	Type Code*	Safety Function
a. **CRO-108, Align Emergency Boration During an ATWS** EOP Rule 1 (ATWS/Unanticipated Nuclear Power Production) [KA: BW/E13 EA1.1 (3.4/3.2)] (5 min)	M, A, S	1
b. **CRO-208, Remove 1A Letdown Cooler from Service** OP/1/A/1104/002 Encl. 4.5 [KA 004 G2.2.2 (4.6/4.1)] (15 min)	N, S	2
c. **CRO-028, Align HPI/LPI Piggyback Mode** EOP Encl. 5.12, ECCS Suction Swap to RBES [KA: EPE-009 EK3.21 (4.2/4.5)] (12 min)	D, A, S, E, EN	3
d. **CRO-403, Start A Reactor Coolant Pump** EOP Encl. 5.6, RCP Restart [KA: 003 A1.01 (2.9/2.9)] (15 min)	D, A, S, L	4P
e. **CRO-014, Depressurize S/Gs and Feed With CBPs** EOP, Rule 3 (Loss of Main or Emergency FDW) [KA: APE-054 AA1.01 (4.5/4.4)] (12 min)	D, S, E, L	4S
f. **CRO-501, Pump the Quench Tank** OP/1/A/1104/017 Encl. 4.1 (Pumping QT) [KA: 007 A1.01 (2.9/3.1)] (10 min)	N, S	5
g. **CRO-600, Recover from Switchyard Isolation** AP/1/A/1700/011, Recovery From Loss of Power Encl. 5.3 [KA: BW/A05 AA1.1 (4.3/4.2)] (15 min)	D, S	6
h. **CRO-011a, Align Intake Canal for Recirculation on Dam Failure** AP/13, Dam Failure [KA: 075 G2.1.23 (4.3/4.4)] (15 min)	D, A, L, S	8

In-Plant Systems@ (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)

i. **NLO-201, Secure the B DAC and Align for Standby Following a Loss of IA** OP/0/A/1106/27 Encl. 4.35 ('B' Diesel Service Air Compressor Operation) [KA: APE-065 AA1.04 (3.5*/3.4*)] (12 min)	N, A, E	8
j. **NLO-017, Align Cooling Water To HPIPs From Station ASWPs** EOP Encl. 5.10 (Station ASW Pump Alignment) [KA: 076 A2.01 (3.5*/3.7*)] (16 min)	D, R, E	4S
k. **NLO-600, Transfer MCC 2XA to Emergency Power** OP/2/A/1107/014 (Removal and Restoration of 4160V Switchgear and 600V Load Centers) [KA: 062 A4.04 (2.6/2.7)] (12 min)	N	6

@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(EN)gineered safety feature	- / - / ≥1 (control room system)
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

Facility: **Oconee**	Date of Examination: **May, 2011**
Exam Level: **RO** ☐ SRO-I ☒ SRO-U ☐	Operating Test No.: **1**

Control Room Systems@ (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)

System / JPM Title	Type Code*	Safety Function
a. **CRO-108, Align Emergency Boration During an ATWS** EOP Rule 1 (ATWS/Unanticipated Nuclear Power Production) [KA: BW/E13 EA1.1 (3.4/3.2)] (5 min)	M, A, S	1
b. **CRO-208, Remove 1A Letdown Cooler from Service** OP/1/A/1104/002 Encl. 4.5 [KA 004 G2.2.2 (4.6/4.1)] (15 min)	N, S	2
c. **CRO-028, Align HPI/LPI Piggyback Mode** EOP Encl. 5.12, ECCS Suction Swap to RBES [KA: EPE009 EK3.21 (4.2/4.5)] (12 min)	D, A, S, E, EN	3
d. **CRO-403, Start A Reactor Coolant Pump** EOP Encl. 5.6, RCP Restart [KA: 003 A1.01 (2.9/2.9)] (15 min)	D, A, S, L	4P
e. **CRO-014, Depressurize S/Gs and Feed With CBPs** EOP, Rule 3 (Loss of Main or Emergency FDW) [KA: APE-054 AA1.01 (4.5/4.4)] (12 min)	D, S, E, L	4S
f. **CRO-501, Pump the Quench Tank** OP/1/A/1104/017 Encl. 4.1 (Pumping QT) [KA: 007 A1.01 (2.9/3.1)] (10 min)	N, S	5
g. **N/A**		
h. **CRO-011a, Align Intake Canal for Recirculation on Dam Failure** AP/13, Dam Failure [KA: 075 G2.1.23 (4.3/4.4)] (15 min)	D, A, L, S	8

In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. **NLO-201, Secure the B DAC and Align for Standby Following a Loss of IA** OP/0/A/1106/27 Encl. 4.35 ('B' Diesel Service Air Compressor Operation) [KA: APE065 AA1.04 (3.5*/3.4*)] (12 min)	N, A, E	8
j. **NLO-017, Align Cooling Water To HPIPs From Station ASWPs** EOP Encl. 5.10 (Station ASW Pump Alignment) [KA: 076 A2.01 (3.5*/3.7*)] (16 min)	D, R, E	4S
k. **NLO-600, Transfer MCC 2XA to Emergency Power** OP/2/A/1107/014 (Removal and Restoration of 4160V Switchgear and 600V Load Centers) [KA: 062 A4.04 (2.6/2.7)] (12 min)	N	6
@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.		

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(EN)gineered safety feature	- / - / ≥1 (control room system)
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

May, 2011

Facility: **Oconee**	Date of Examination: **May, 2011**
Exam Level: **RO** ☐ SRO-I ☐ SRO-U ☒	Operating Test No.: **1**

Control Room Systems@ (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)

System / JPM Title	Type Code*	Safety Function
a. **CRO-108, Align Emergency Boration During an ATWS** EOP Rule 1 (ATWS/Unanticipated Nuclear Power Production) [KA: BW/E13 EA1.1 (3.4/3.2)] (5 min)	M, A, S	1
b. **N/A**		
c. **CRO-028, Align HPI/LPI Piggyback Mode** EOP Encl. 5.12, ECCS Suction Swap to RBES [KA: EPE009 EK3.21 (4.2/4.5)] (12 min)	D, A, S, E, EN	3
d. **N/A**		
e. **N/A**		
f. **N/A**		
g. **N/A**		
h. **CRO-011a, Align Intake Canal for Recirc on Dam Failure** AP/13, Dam Failure [KA: 075 G2.1.23 (4.3/4.4)] (15 min)	D, A, L, S	8

In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. **N/A**		
j. **NLO-017, Align Cooling Water To HPIPs From Station ASWPs** EOP Encl. 5.10 (Station ASW Pump Alignment) [KA: 076 A2.01 (3.5*/3.7*)] (16 min)	D, R, E	4S
k. **NLO-600, Transfer MCC 2XA to Emergency Power** OP/2/A/1107/014 (Removal and Restoration of 4160V Switchgear and 600V Load Centers) [KA: 062 A4.04 (2.6/2.7)] (12 min)	N	6
@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.		

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(EN)gineered safety feature	- / - / ≥1 (control room system)
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

ES-301 **Operating Test Quality Checklist** **Form ES-301-3**

Facility: **Oconee**	Date of Examination: **05-02-2011**	Operating Test Number: **1**		
	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).	GW		MB
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	GW		MB
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	GW		MB
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	GW		MB
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	GW		MB
	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	GW		MB
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.	GW		MB
	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.		GW		MB

	Printed Name / Signature	Date
a. Author	Gabriel WASHBURN / [signature]	4-22-11
b. Facility Reviewer(*)	John R. Steely / [signature]	4-22-11
c. NRC Chief Examiner (#)	MARK A. BATES / [signature]	04-26-11
d. NRC Supervisor	MALCOLM T. WIDMANN / [signature]	04/27/11

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

Facility: **Oconee** Date of Exam: **05-02-11** Operating Test No.: **1**

APPLICANT	EVENT TYPE	Scenarios 1 CREW POSITION SRO	1 ATC	1 BOP	2 SRO	2 ATC	2 BOP	3 SRO	3 ATC	3 BOP	4 SRO	4 ATC	4 BOP	TOTAL	MINIMUM(*) R	I	U
RO	RX					6									1	1	0
X	NOR		1			1									1	1	1
SRO-I	I/C		4 6			3			3,4,6						4	4	2
☐	MAJ		7			7			7,8						2	2	1
SRO-U ☐	TS														0	2	2
RO	RX														1	1	0
X	NOR									1					1	1	1
SRO-I	I/C			2,3,5			2,4,5			2,5					4	4	2
☐	MAJ			7			7			7,8					2	2	1
SRO-U ☐	TS														0	2	2
RO	RX				6										1	1	0
☐	NOR	1			1			1							1	1	1
SRO-I	I/C	2,3,4 5,6			2,3,4 6			2,3,4 5,6							4	4	2
☐	MAJ	7			7			7,8							2	2	1
SRO-U X	TS	2,3 6			2,4			4,5							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 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.

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.

Facility: **Oconee** Date of Examination: **05-02-2011** Operating Test No.: **1**

Competencies	APPLICANTS											
	RO-oatc [X] SRO-I [ ] SRO-U [ ]				RO-bop [X] SRO-I [ ] SRO-U [ ]				RO [ ] SRO-I [ ] SRO-U [X]			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	1, 4 6, 7 8	1, 3 6, 7	3,4 6,7,8		2, 3 5, 7 8	2, 4, 5 7, 8	2, 5 7, 8		2, 3 4, 5 6, 7 8	2, 3 4, 5 7, 8	2, 3 4, 5 7, 8	
Comply With and Use Procedures (1)	1, 4 6, 7 8	3, 6 7	3, 4 5, 6 7, 8		2, 3 5, 7 8	2, 4, 5 7, 8	1, 2 3, 4 5, 6 7, 8		1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8	
Operate Control Boards (2)	1, 4 6, 7	1, 3 6, 7	3, 4 5, 6 7, 8		2, 3 5, 7 8	2, 4, 5 7, 8	1, 2 4, 5 6, 7 8					
Communicate and Interact	1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8		1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8		1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8	
Demonstrate Supervisory Ability (3)									1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8	1, 2 3, 4 5, 6 7, 8	
Comply With and Use Tech. Specs. (3)									2, 3 6	2, 4	4, 5	

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.

Tier / Group	Randomly Selected KA	Reason for Rejection
2 / 1	SYS008 A4.10	Q(34) No procedural requirement to operate two CC coolers. New KA 008A4.07 MB 1/18/11
2 / 1	SYS061 A2.06	Q(44) No procedural guidance on action to take for back leakage. 061A2.07 MB 1/18/11
2 / 1	SYS064 A1.01	Q(49) Our Keowee units do not have actions taken on lube oil temp or pressures. 064A1.03 MB 1/18/11
2 / 2	SYS011 K1.05	Q(57) No relation between PZR LCS and the reactor regulating system. 011K1.03 MB 1/18/11
2 / 1	SYS007 K3.01	Q(59) Loss of ITM system does not affect NC. We use Thot and Tcold. 017K6.01 MB 1/18/11
3 / 0	GEN2.2 2.2.20	Q(68) Could not write a discriminating ROP question on this KA. Chief Examiner replaced with G2.2.22 3/4/11
3 / 0	GEN2.4 2.4.32	Q(73) NO RO guidance for loss of all statalarms. Only in Eplan. G2.4.34 MB 1/18/11
1 / 1	APE015/017 AA2.01	Q(78) Could not write an SRO level question on this KA. BWE04EA2.1 MB 1/18/11
1 / 2	BWA04 AA2.1	Q(83) Could not write a discriminating SRO question on this KA. Chief Examiner replaced with BWA04AA2.2. 3/4/11
2 / 1	SYS006 2.4.50	Q(86) Could not write an SRO level question on this KA. Chief Examiner new KA 012G2.4.50 3/7/11
2 / 1	SYS007 A2.02	Q(87) Could not write a valid SRO question on this KA. Chief Examiner selected a new KA 022 A2.02 3/24/2011
2 / 1	SYS063 2.4.20	Q(89) Cannot write discriminating question on this KA. Only on note or caution in our EOPs. G2.4.30 MB 1/18/11
2 / 2	SYS068 2.1.32	Q(93) Cannot write discriminating question on this KA. Operations does not do LWRs. 002G2.1.32 MB 1/18/11

ES-401 **Written Examination Quality Checklist** **Form ES-401-6**

Facility: Oconee Nuclear Station Date of Exam: 5/2/2011 Exam Level: RO ☑ SRO ☐

Item Description			Initial a	Initial b*	Initial c*
1.	Questions and answers are technically accurate and applicable to the facility.				
2.	a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.				
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401				
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: __ the audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or __ the examinations were developed independently; or X the licensee certifies that there is no duplication; or __ other (explain)				
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: 8 / - ; Modified: 16 / - ; New: 51 / -			
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: 34 / - ; C/A: 41 / -			
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.				
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.				
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.				
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.				

	Printed Name / Signature	Date
a. Author	Gabriel WASHBURN /	5-11-11
b. Facility Reviewer (*)	John R Steely /	5-11-11
c. NRC Chief Examiner (#)	MARK A. BATES /	5-12-11
d. NRC Regional Supervisor	MICHAEL T. WIDMANN /	05/12/11

Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations.
Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.

ES-401 **Written Examination Quality Checklist** **Form ES-401-6**

Facility: Oconee Nuclear Station Date of Exam: 5/2/2011 Exam Level: RO ☐ SRO ☑

Item Description					Initial a	Initial b*	Initial c*
1.	Questions and answers are technically accurate and applicable to the facility.				BCW		MB
2.	a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.				BCW		MB
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401				BCW		MB
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).				BCW		MB
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: __ the audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or __ the examinations were developed independently; or __ the licensee certifies that there is no duplication; or __ other (explain)				BCW		MB
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 8 / 4	Modified 16 / 2	New 51 / 19	BCW		MB
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 34 / 10	C/A 41 / 15		BCW		MB
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.				BCW		MB
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.				BCW		MB
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.				BCW		MB
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.				BCW		MB

	Printed Name / Signature	Date
a. Author	Gabriel WASHBURN / Gabriel Wash	5-11-11
b. Facility Reviewer (*)	John R Steely / John R Steely	5-11-11
c. NRC Chief Examiner (#)	MARK A. BATES / Mark A. Bates	5-12-11
d. NRC Regional Supervisor	MALCOLM T. WIDMANN / Malcolm T. Widmann	05/12/11

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.

Written Exam Review Worksheet
Oconee 2011-301

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
GENERAL COMMENTS															
B= Bank / M=Modified / N=New / F=Fundamental Level (I.E. Memory) / H=Higher Cognitive Level (I.E. C/A)															
Note: For Bank questions, at a minimum change the location of the correct answer.															
Some questions were revised even though they were sat questions because of the large number of questions pulled from recent exams (I.E. 9 from the 2009 exam).															
For each Bank question, list the bank from which it was taken AND list any previous NRC exams on which it appeared. I just want to ensure that the bank was not limited to recently administered NRC exams and that it was not limited to a one-for-one KA match (all questions meet several KAs). NUREG-1021, ES-401, Page 8 of 33, states, "If the bank contains more than one question that fits a specific KA statement, randomly select from among the available questions unless there is an appropriate basis for selecting a specific question (e.g., higher cognitive level, better discrimination validity, more operationally oriented, or site-specific priority)."															
RO EXAM															
1	007EK3.01	N	H	2										S	K/A is met. Reason for actions on Rx Trip is required to answer question. No further changes made. Q ready for administration. MAB 10MAY2011
2	008AK3.05	N	H	2										S	K/A is met. Reasons for ECCS termination criteria are required in the presence of a vapor space LOCA.
3	009EK1.01	B	F	2										S	K/A is met. SBLOCA operational implications associated with BCM of heat transfer are being tested. See generic comment on answer location for Bank questions. Was the answer location changed? Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Provided.
4	011EK2.02	B	H	2										S	K/A is met. The flow limits during the LOCA are dependent on the number of HPI pumps running.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															See generic comment on answer location for Bank questions. Was the answer location changed? Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q changed due to concerns with predictability and potential lack of random selection from the exam bank. New Q is satisfactory. No further changes made. Q ready for administration. MAB 10MAY2011
5	015/017G2.1.7	N	H	2										S	K/A is met. Plant conditions must be evaluated and judgments must be made to deal with the trip of the RCP. No further changes made. Q ready for administration. MAB 10MAY2011
6	025AK1.01	B	F	2										S	K/A is met. Op implications of loss of DHR are required. Can the unavailability of LPI Pumps 1A and 1B be deduced from CT-4 being the only power feed? If so, then delete the last bullet. If not, then the bullet can remain. Info needs to remain in Q. MAB 10MAY2011 See generic comment on answer location for Bank questions. Was the answer location changed? OK MAB 10MAY2011 Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Source now listed. OK MAB 10MAY2011 No further changes made. Q ready for administration. MAB 10MAY2011
7	027AK2.03	M	H	2										~~E~~ S	Does the 65% help cue the applicant on Q5 that the 6% is associated with a MFP trip and NOT an RCP trip? Changed to 62%. MAB 10MAY2011 Question documentation states that a calculation is needed to determined that the pressurizer is saturated. What calculation is required to know that the pressurizer is saturated? If pressurizer level is stable and pressure is going up, how could the pressurizer be subcooled. It seems obvious that sensible heat is not being added, rather heat of vaporization is being added, which is causing the increase in pressure. Discuss application to plausibility of subcooled. Licensee agreed with comment while here in the office, but they did not change the question documentation which stated that a calculation was required. OK MAB 10MAY2011

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															K/A is met. Interrelation between controllers and PCS malfunction is being tested. No further changes made. Q ready for administration. MAB 10MAY2011
8	029EK2.06	B	F	2										~~E~~ S	When was the modification made on the CRI system for each unit? – Ballpark – I am not looking for the exact day. Q revised based on date of modification and fact that this was another 2009 question and related predictability concerns. MAB 10MAY2011 K/A is met by testing relay and breaker knowledge during an ATWS. See generic comment on answer location for Bank questions. Was the answer location changed? Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q revised based on date of modification and fact that this was another 2009 question and related predictability concerns. MAB 10MAY2011 Q ready for administration. MAB 10MAY2011
9	038EA1.10	M	H	2										S	K/A is met. Rad monitor info is being tested wrt SGTL. Chief examiner is using judgment to determine that the intent of the KA is met since the EOP at a B&W plant is implemented even when charging can maintain pzr level. No further changes made. Q ready for administration. MAB 10MAY2011
10	054AA1.03	M	F	2										S	K/A is met. AFW oil cooling during a loss of MFW is being tested. No further changes made. Q ready for administration. MAB 10MAY2011
11	055EA2.06	N	H	2										S	K/A is met. SBO and resultant lockout knowledge is required. Minimal enhancement made. Q ready for administration. MAB 10MAY2011
12	056AK1.01 U	N	H	2					x					~~U~~ S	"Stay the same" does not appear to be plausible. Temperature remaining stable for 10 minutes does not seem like a reasonable misconception. The only way for something to remain the same is to either be maintained by a control system, or be in some sort of equilibrium. Second part of Q

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															replaced. MAB 10MAY2011 The misconception that caused the 50% OR to be plausible, then causes "increase" to not be plausible. Second part of Q replaced. MAB 10MAY2011 K/A is met. NC operational implication knowledge is required. Q ready for administration. MAB 10MAY2011
13	058G2.4.11	N	F	2										~~E~~ S	Suggest testing the differing piece of the first part of each answer choice. Using the word ONLY has potential to make the designated correct answer to be incorrect. We need to use more precise terminology and state exactly what is intended. I.E.: what is really being tested is whether or not the Ground Relay Selector Switch is required to be rotated. First part of the Q was modified. MAB 10MAY2011 K/A is met. Abnormal condition procedure knowledge for a loss of DC is required to answer question. Q ready for administration. MAB 10MAY2011
14	062AA2.04	N	F	2										S	K/A is met. Knowledge of temp limits for RCP motor stator resulting from a loss of SW is being tested. No further changes made. Q ready for administration. MAB 10MAY2011
15	065AA2.05	B	H	2										S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q changed due to concerns with predictability and potential lack of random selection from the exam bank. New Q is satisfactory. MAB 10MAY2011 K/A is met. Knowledge of when to commence a plant shutdown is being tested. In this case the applicant must know that procedures require that the plant be shutdown via reactor trip. Q ready for administration. MAB 10MAY2011
16	077AA1.05	N	H	2										S	KA Match: ESFs will receive power from CT-1 or 4 depending on LOCA coincident with low voltage. No further changes made. Q ready for administration. MAB 10MAY2011
17	BWE04EK3.3	N	H	2										~~E~~	Subset concerns. If SG P is lowered to allow CBP flow, will SG pressure

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
														S	also be lower than RCS P? Discuss concerns for more than one correct answer. Factually true, but this is not the reason the actions are performed. MAB 10MAY2011 If main steam pressure is lowering, would RCS temperature be rising? Would RCPs be secured? Is it possible for NC to be building in, which would make a rising temp possible? Two RCPs would still be running. MAB 10MAY2011 K Match: Knowledge of why actions are being performed during IHT are required. No further changes made. Q ready for administration. MAB 10MAY2011
18	BWE05G2.4.6	N	H	2										S	KA Match: EHT mitigation strategy is being tested. No further changes made. Q ready for administration. MAB 10MAY2011
19	003AA2.03	N	H	2										S	KA Match: Knowledge of Nis are needed to answer question wrt dropped rod. No further changes made. Q ready for administration. MAB 10MAY2011
20	005AA2.01 U	N	H	2					x					~~U~~ S	I do not see the plausibility if a runback occurring when one rod is just 8% out from the rest of its bank. To raise the plausibility to a more acceptable level, consider placing G7 R6 at the lowest possible position without having a runback occur. This will be a better test of knowledge of interlocks associated with the runback. Discuss options with licensee. Changed rod to 0% W/D. MAB 10MAY2011 I do not see the plausibility of HAND power failure reverting to manual. Does HAND mean MANUAL? If so two of the answer choices are telling me that if there is a MANUL power failure then it will revert to MANUAL. Changed second part to have them determine whether or not an asymmetric runback can be stopped. MAB 10MAY2011 Idea to consider: Place the rod at fully inserted. Test whether a runback WILL or WILL NOT occur. Then test whether the runback can be placed on HOLD or NOT. Done. MAB 10MAY2011 Q ready for administration. MAB 10MAY2011

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
21	028AK1.01	N	H	2										S	KA Match: PLCS malfunction due to a reference leg leak is being tested. No further changes made. Q ready for administration. MAB 10MAY2011
22	032AA1.01	N	F	2										S	KA Match: Vital power supplies feed the SRNIs, therefore testing knowledge required of the KA. No further changes made. Q ready for administration. MAB 10MAY2011
23	076AK3.06 U	B	F	2					x					~~U~~ S	"C" is not plausible. "C" states that the reason we shutdown slower is to reduce the time the plant operates. I am struggling with the logic that supports this as being plausible. Q changed. 10MAY2011 Plausibility of "B": You can always shut down using boron, so if control rod movement was the reason to reduce the rate, then all the operators would have to do is borate. Discuss plausibility. Q changed. 10MAY2011 KA Match: Knowledge of the reasons for actions due to high RCS activity are required. Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q changed. 10MAY2011 Q ready for administration. MAB 10MAY2011
24	BWA03AA1.1	B	H	2					?					~~E~~ ? S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. 2007 Exam. MAB 10MAY2011 How is underfeed plausible? I can understand how failing as-is may be plausible, but I am not sure I see underfeed as being plausible. Discuss. Licensees explanation OK. Valve fails to 50%, so if power higher, then it would be correct. MAB 10MAY2011 KA Match: Knowledge of a failure mode for NNI is required – ability to monitor. Q ready for administration. MAB 10MAY2011
25	BWA05	N	H	2										S	KA Match: KHU operating characteristics are being tested. This meets

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
	AK3.1														the intent of the KA for EDGs. No further changes made. Q ready for administration. MAB 10MAY2011
26	BWE03G2.4.45	N	H	2					?					~~E~~ S	Plausibility of "average of all 47": It would appear that 5 highest of the operable 47 would be more plausible. Discuss with licensee. Licensee explanation OK. MAB 11MAY2011 KA Match: The question requires knowledge of TCAs for ISCM and which one to perform first. No further changes made. Q ready for administration. MAB 11MAY2011
27	BWE09EK1.3	N	H	2					x	x				~~E~~ S	"B" is not plausible the way it is written. When is the applicant ever "required" to maintain a specific gpm flow rate using EFW? I can see an applicant being required to maintain flow rates and SG levels between min and max limits, but an exact value for flow rate seems to be not credible. Licensee explanation OK. MAB 11MAY2011 What is SG level? This forces the applicant to make an assumption on SSG level. If level is above the LOSCM setpoint, then "A" may be correct. SG level added – OK. MAB 11MAY2011 KA Match: NC remedial action knowledge is required. Q ready for administration. MAB 11MAY2011
28	003A4.02	B	H	2										S	KA Match: RCP motor parameter knowledge is required. Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q was on 2009 exam. Q modified to make a different answer correct due to concerns with predictability and potential lack of random selection from the exam bank. Modified Q is satisfactory. MAB 11MAY2011
29	004A1.07	N	F	2										S	KA Match: Encroachment on temp limits is a result of having too much L/D flow for the amount of CC flow. Intent of KA is met. No further changes made. Q ready for administration. MAB 11MAY2011
30	004K5.37	N	H	2										~~E~~	The spare IX is taken out of service and placed back in service according to the stem. Does the initial power level impact the question (no power level

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
														S	is provided for IC)? Was resin replaced before the IX was placed back in service – will the applicants have this same question? Applicant would need to make an invalid assumption if resin replacement was assumed. Power level added. OK MAB 11MAY2011 KA Match: Knowledge of boron concentration effects are required. Q ready for administration. MAB 11MAY2011
31	005K4.01	M	F	2										S	KA Match: Overpressure interlock knowledge is required. No further changes made. Q ready for administration. MAB 11MAY2011
32	006K1.08	N	H	2										S	KA Match: ES-1/2 cause L/D to isolate, therefore knowledge of interactions between ECCS and CVCS is required. No further changes made. Q ready for administration. MAB 11MAY2011
33	007K4.01	N	F	2										S	KA Match: Knowledge of QT design features are required. No further changes made. Q ready for administration. MAB 11MAY2011
34	008A4.07 U	N	F	2										~~S~~ ~~U~~ S	KA Match: Knowledge of CCW surge tank min level is required. Licensee validation after the draft submittal revealed that there was a potential for more than one correct answer and a potential for no correct answer. This caused the unsat rating, even though the draft originally was rated as sat. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
35	008K1.03	N	F	2										S	KA Match: Knowledge of PRMS is needed to determine leakage source. No further changes made. Q ready for administration. MAB 11MAY2011
36	010K2.03	N	F	2										S	KA Match: Power supply knowledge for PORV indication is required. No further changes made. Q ready for administration. MAB 11MAY2011
37	012K3.02	N	H	2										S	KA Match: Knowledge of an RPS malfunction and its impact on the TG is

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															required. No further changes made. Q ready for administration. MAB 11MAY2011
38	013K6.01	M	H	2										S	KA Match: Knowledge of malfunction of detectors on ESFAS is required. No further changes made. Q ready for administration. MAB 11MAY2011
39	022K2.01	B	F	2										S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q was on 2009 exam. Q replaced due to concerns with predictability and potential lack of random selection from the exam bank. Q is satisfactory. MAB 11MAY2011 KA Match: Power supply knowledge for cont fans in required. Q ready for administration. MAB 11MAY2011
40	026A2.08	B	F	2										S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q was misclassified as a bank – it was actually a new Q. MAB 11MAY2011 KA Match: Knowledge of securing CS is required. No further changes made. Q ready for administration. MAB 11MAY2011
41	026K3.01	N	H	2										S	KA Match: Knowledge of CSS malfunction effect on CCS is required. No further changes made. Q ready for administration. MAB 11MAY2011
42	039A3.02	N	H	2										S	KA Match: Knowledge of MRSS isolation is required. No further changes made. Q ready for administration. MAB 11MAY2011
43	059A4.03	B	F	2										S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. 2007 Exam. MAB 11MAY2011 Suggest mimicking exact wording in NOTE from procedure: ask which MFW pump is preferred to be shutdown first.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
															Incorporated. MAB 11MAY2011 KA Match: Knowledge of how to control MFW during a power change is required. Q ready for administration. MAB 11MAY2011
44	061A2.07	N	H	2										~~E~~ S	Have licensee walk me through the procedure flow path to ensure that 1FDW-316 is not a viable option to be the next method. Would operators be wrong if they used 1FDW-316 by sending an operator to the valve? Question will be sat with an assurance of 1FDW-316 being incorrect. Licensee's explanation OK. MAB 11MAY2011 KA Match: Requires knowledge of AFW control with AOV failure. Unit 2 marked up references were provided to justify a unit 1 question. Licensee addressed this by making it a unit 2 question. Q ready for administration. MAB 11MAY2011
45	061K6.01	M	H	2										S	KA Match: Knowledge of malfunction to controller and its effect on AFW is required. No further changes made. Q ready for administration. MAB 11MAY2011
46	062G2.4.47	B	H	2										S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q was on 2009 exam. Q modified due to concerns with predictability and potential lack of random selection from the exam bank. Modified Q is satisfactory. MAB 11MAY2011 KA Match: Knowledge of capability limits is required to diagnose trends associated with AC, therefore KA is met. Q ready for administration. MAB 11MAY2011
47	063G2.4.2	N	H	2										~~E~~ S	I would like to see more precise terminology in "C" and "D". The word ONLY should be defined in each answer choice. Unless ONLY is definitively technically correct. Is there any other mechanism like mechanical failure, etc that could cause a CRD breaker to trip. I know what you are trying to accomplish, but the word ONLY is not very precise and likely not accurate. You are really testing the difference between SHUNT TRIP occurs or DOES NOT OCCUR. Incorporated. MAB 11MAY2011 KA Match: Rx Trip knowledge associated with DC is required. Rx Trip is

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
															an EOP entry criterion, therefore KA is met. Q ready for administration. MAB 11MAY2011
48	063K3.02	N	F	2										~~E~~ S	The load will not operate when breaker closed in TEST. I just want to double check that applicants will not be confused with terminology. OK MAB 11MAY2011 KA Match: Malfunction of DC control power knowledge is required. No further changes made. Q ready for administration. MAB 11MAY2011
49	064A1.03	M	H	2										S	KA Match: KHU is Oconee equivalent of EDG. Question test knowledge of monitoring voltages and the impact those voltages will have when the breaker is closed. No further changes made. Q ready for administration. MAB 11MAY2011
50	064K6.08	N	H	2										~~E~~ S	KA Match: KHU is Oconee equivalent to EDG. Water level is functional equivalent to fuel for an EDG. "D" uses a bold underline whereas the other choices do not use abold underline – they just use a regular underline – make all the same. Underlines deleted. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
51	073A2.01	B	H	2										S	KA Match: Knowledge of loss of power to PRM and how to use procedures to mitigate. Do procedures and control room indications use descriptive noun names for rad monitors? If so, the leaving the descriptions is OK, if not then the questions should only have the descriptions available to the operators. Names are in AP. OK MAB 11MAY2011 No further changes made. Q ready for administration. MAB 11MAY2011
52	073K5.01	B	H	2										S	Current conditions should state 2.1 gpd just like the initial conditions. Applicants can look at both conditions and make the determination that the leakage has not change (I.E. is stable). Do procedures and control room indications use descriptive noun names for rad monitors? If so, the leaving the descriptions is OK, if not then the

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															questions should only have the descriptions available to the operators. Names are in AP. OK MAB 11MAY2011 KA Match: Knowledge of PRMs and types of sources is required. Q was on 2009 exam. Q modified due to concerns with predictability and potential lack of random selection from the exam bank. Modified Q is satisfactory. MAB 11MAY2011
53	076A3.02	N	H											~~E~~ S	Under what conditions are two SW pumps required to be running? What information in the stem would lead the applicant to believe that only two pumps could be running? I either need to better understand the plausibility or info may need to be added to the stem to ensure that two pumps running is plausible. Unit 1 and Unit 2 share three LPSW pumps and two are normally operating. An ES actuation on either unit will cause all three to operate. OK MAB 11MAY2011 KA Match: Knowledge of auto SW operation during ES actuation is required. Q ready for administration. MAB 11MAY2011
54	078K1.03	B	H	2										S	KA Match: Knowledge of IA connections with Cont Air is required. Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q was on 2009 exam. Q not modified due to difficulty with modification. Q is satisfactory. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
55	103K4.06	N	F	2										S	KA Match: Cont Iso knowledge of required. No further changes made. Q ready for administration. MAB 11MAY2011
56	001A1.06	B	H	2										S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. Q was on 2007 exam. Q modified due to concerns with predictability and potential lack of random selection from the exam bank. Modified Q is satisfactory. MAB 11MAY2011 KA Match: Knowledge of power level and rate of rod recovery is required. Q ready for administration. MAB 11MAY2011

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
57	011K1.03	N	F	2										S	KA Match: Knowledge of how the PLCS affects the PPCS is required. No further changes made. Q ready for administration. MAB 11MAY2011
58	014G2.1.20 U	N	F	2					x					~~U~~ S	Plausibility: The question statement asks for a determination of whether or not two indications agree. "Position reset" sure sounds like a switch that does more than just checks agreement of two indications. I am not sure that these are plausible. First half changed to address comment. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
59	007K3.01 U	B	H	2					x			X		~~U~~ S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. 2009 Exam. MAB 11MAY2011 Compare this question where the rad monitor is not accompanied by a noun name description with the other questions where we are telling them that the monitors are N-16 monitors, etc. I will allow descriptive names if Oconee procedures use them, otherwise Oconee has made the choice by virtue of procedure design that their operators know what all of their equipment IDs are. Name added. MAB 11MAY2011 Plausibility of sump level constant does not appear to be at an appropriate level. It is the sump level being constant that creates the unsat designation for the question. This part was modified. MAB 11MAY2011 Nothing in the stem is provided to have an applicant make a determination on RCS activity. Suggest adding a normal amount of activity in the Initial Conditions. Q modified to address concern. MAB 11MAY2011 Licensee wrote the question to the wrong KA. Review by the CE revealed that the approved KA was 017K6.01 not 007K3.01. Therefore, the question was also unsat due to KA mismatch. The question was replaced on 12MAY2011. MAB 12MAY2011 Q ready for administration. MAB 12MAY2011
60	034A4.01	N	F	2								x		~~U~~	KA Match: How does 3RIA-49 alarming impact the fuel handling equipment? Consider using procedure requirements that instruct operators

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
														S	to do something with the fuel handling equipment if a rad level changes. Accepted KA Match. Equipment needed to perform refueling activities is affected. MAB 11MAY2011 Q modified to address concerns. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
61	041A2.02	N	H	2										~~E~~ S	What indications would the plant provide that would tell the operator that the valve is stuck open? These indications should be provided instead of telling the operator that the TBV is stuck open. What about giving RCS temperature and pressure or steam header pressure? If steam header pressure is below the setpoint for the valve to close, yet the valve position is indicating open, the operator could then make the same assessment. Licensee explanation OK. MAB 11MAY2011 KA Match: Knowledge of what to do when SDV fails open is required. No further changes made. Q ready for administration. MAB 11MAY2011
62	045A3.11	N	F	2										S	KA Match: Knowledge that allows for monitoring of Turbine Trip is required. No further changes made. Q ready for administration. MAB 11MAY2011
63	068K5.04	M	H	2					?					~~E~~ S	Place a value for TB sump EC in stem. This will add some credibility to distracters. Discuss. Added. MAB 11MAY2011 KA Match: Knowledge of actions to reduce rad levels and spread of contamination are required. Q ready for administration. MAB 11MAY2011
64	075K2.03	N	F	2										~~E~~ S	Does the C LPSW pump have a unit designation? KA Match: Knowledge of power supply for service water pump is required. No further changes made. Q ready for administration. MAB 11MAY2011
65	086K4.02	B	F	2										~~E~~	Where did this question come from? It is listed as Bank, but I did not see a source of which bank.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
														S	2007 exam. MAB 11MAY2011 Same generic statement for descriptive names for components. Show me that a procedure is referencing the component with both an alpha-numeric designation as well as a description. Stated in procedure. OK MAB 11MAY2011 KA Match: Requires knowledge of how system pressure is maintained. No further changes made. Q ready for administration. MAB 11MAY2011
66	G2.1.42	N	F	2										~~E~~ S	The question asks about minimum SR requirements, then the answer choices just lists SR instruments. What requirements are being tested? I think if you really read the words, that nothing is really be asked. Are you asking for the minimum number or which ones to be used for refueling? OK. MAB 11MAY2011 Wording enhancements made. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
67	G2.1.8	N	F	2										S	KA Match: Knowledge of the order of activities is needed, including when to direct a NEO to open breakers. No further changes made. Q ready for administration. MAB 11MAY2011
68	G2.2.22	N	F	2										S	KA Match: Knowledge of SL required. C and D minor enhancements. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
69	G2.2.7	B	F	2										S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. 2009 exam. Modified answer due to previously mentioned predictability issues. MAB 11May2011 KA Match: Knowledge of IPTEs required. Q ready for administration. MAB 11MAY2011
70	G2.3.11 U	M	F	2										~~E~~ ~~U~~	KA Match: Ability to control rad releases is required. Is the half setpoint listed in PT/0/A/230/001? If so will the applicants

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
														S	argue that the setpoint then needs to be a quarter of the full setpoint? Question had to be modified to create one and only one correct answer. Question was initially rated as E, but discussions with licensee revealed that the question was not satisfactory as written because more than one value was stated in the procedure. Q ready for administration. MAB 11MAY2011
71	G2.3.15 U	B	F	2										~~S~~ ~~U~~ S	Where did this question come from? It is listed as Bank, but I did not see a source of which bank. 2007 exam. Modified slightly due to predictability concerns. MAB 11MAY2011 KA Match: Knowledge of rad mntr is required. NRC review revealed that there was no correct answer. Stem changed from full power to mode 6 to ensure that one and only one answer was correct. MAB 12MAY2011 Q ready for administration. MAB 12MAY2011
72	G2.3.7	B	F	2										S	Reference Generic Comment at beginning: This bank question and others like it that are formatted differently do not need to have the correct answer location changed. Q changed due to concerns with predictability and potential lack of random selection from the exam bank. New Q is satisfactory. MAB 10MAY2011 KA Match: Knowledge of RWP during abnormal conditions is required. Q ready for administration. MAB 11MAY2011
73	G2.4.34	N	H	2										S	KA Match: Knowledge of RO tasks outside CR during an emergency are required. No further changes made. Q ready for administration. MAB 11MAY2011
74	G2.4.39	B	F	2										S	KA Match: Knowledge of RO duties during an emergency is required. Q changed due to concerns with predictability and potential lack of random selection from the exam bank. New Q is satisfactory. MAB 10MAY2011 Q ready for administration. MAB 11MAY2011
75	G2.4.8	N	F	2										~~E~~ S	KA Match: Knowledge of how to use post trip EOPs in conjunction with flood AP is required.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
															Define ONLY in "C and "D". Absolute language is rarely 100% correct. In parentheses you could place (AP/10 is not required to be used). This would be more accurate because any other alarm response or administrative procedure allowance will mean that EOP ONLY is not accurate. Incorporated. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
SRO EXAM															
76	007EA2.02	N	H	3										~~E~~ S	Question documentation talks about an ATWS, but I do not see anything in the stem indicating an ATWS? No ATWS. HPI pump failing to start is the auto safety function that failed. MAB 11MAY2011 KA Match: May be acceptable pending further education. What is the auto safety function that failed to occur? Rx Trip? 1C HPI Pump? What information is provided in the stem that allows for the determination that an ATWS is occurring? What info in the stem tells the applicant that the 1C HPI pump did not start (1HP-409 failing closed?)? As long as the auto function failing is understandable, then the KA match will be OK. The question requires knowledge of the proper actions and why those actions are required. HPI pump failing to start is the auto safety function that failed. MAB 11MAY2011 SRO-Only: The second part of each answer choice requires knowledge of the reasons for performing actions that are required when auto safety functions fail to occur. This part of the answer choices also matches the required knowledge of the KA. Note: This question also appears to fit the K/A for Q77 (EPE009G2.4.18). Discuss overlap concerns between this question and Q77. If an applicant knows that venting is done to raise HPI flow while in the LOCA CD Tab, will the applicant then be able to apply this knowledge to arrive at the correct option for the second half of this question. Concerns evaluated – see comment on next Q – OK. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
77	009G2.4.18	N	H	3										S	Question is satisfactory. KA Match: Question tests EOP basis knowledge as it pertains to actions resulting from a SBLOCA.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															SRO-Only: Previously discussed SRO level concerns with EOP basis information and determination was made that is was acceptable. See comment above regarding overlap concerns with Q76. Final determination of overlap concern will not be made until after discussion with the facility licensee. Modifications made to address any possible overlap issues. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
78	BWE04EA2.1 U	M	H	2										~~S~~ ~~U~~ S	Question is satisfactory. KA Match: Procedure selection knowledge is required when in a LOHT condition. SRO-Only: The procedure selection is beyond simple entry conditions, thereby testing procedure selection at the SRO level. Licensee identified, through validation after the draft submittal, that a technical issue existed that caused more than one answer to be correct. This caused the status of the question to change from sat to unsat. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
79	040AA2.01	N	H	2										S	KA Match: Knowledge is MSLB location is required to make correct e-plan call. SRO-Only: The SRO would interpret steam flow and pressure to determine leak location, which also factors into the E-Plan. In other words, the classification of the event is part of "interpreting" the steam pressures and flows. Is a reference required to be provided to the applicant? If so, is it preferred to state in the question that a reference has been provided? Also, discuss to ensure that there are no negative impacts of the proposed reference on any of the other questions. Added. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
80	058G2.2.22	N	H	2										S	Question is satisfactory. KA Match: Knowledge of TS LCOs relating to a loss of DC power is required to arrive at the correct answer.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															SRO-Only: TS Rules of usage are being tested, which is beyond entry conditions. Mode change requirements are being tested, which is typically an SRO-only administrative function. No further changes made. Q ready for administration. MAB 11MAY2011
81	062G2.1.20	N	H	2										S	Question is satisfactory. KA Match: Knowledge of interpreting and executing loss of NSW procedure steps is required to arrive at the correct answer. SRO-Only: Assessing plant conditions and selection of a section of the procedure is required.
82	037G2.4.41	B	H	2										~~E~~ ? S	Question may be satisfactory. KA Match: Knowledge of SGTR related EALs required to arrive at the correct answer. SRO-Only: E-Plan is solely an SRO function. Does licensee want to state in the stem that a reference is provided? Overlap with Q79(APE040AA2.01) evaluated – no overlap concerns. Is the correct answer designated accurately? Is the question documentation accurate? There is a 30 gpm tube leak in the "A" SG. There is a MSLB in the "B" SG. How does this result in a path to the environment? It appears to me that the most likely correct answer is "A", based on the information in the stem. They would get 4 points for RCS leakage > 160 gpm. Q significantly changed. OK MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
83	BW/AA2.2	N	F	2					X ?					~~U~~ ? S	Define in "A" and "B" what the word ONLY means? "Only" is an absolute term, and anything else that is required can make "B" an incorrect answer. More precise wording is needed. "1 hour" appears in all answer choices. Suggest the following for first part answer choices: A. Actions of TS 3.0.3 NOT required. B. Actions of TS 3.0.3 NOT required. C. Actions of TS 3.0.3 required. D. Actions of TS 3.0.3 required.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
															Distractor analysis for "C" states that TS 3.0.3 would be required to be entered, yet the designated correct answer is "B"? I do not see the TS 3.0.3 entry. Discuss with licensee. The correct answer is "C". TS 3.3.15 requires declaring all TSVs inoperable. TS 3.7.2 (TSVs) does not have a condition for all TSVs to be inoperable – as a result TS 3.0.3 actions must be performed. MAB 11MAY2011 Plausibility: How is TS 3.0.3 plausible? See above. OK MAB 11MAY2011 KA Match: Determining TS 3.0.3 actions would be testing adherence to procedures. SRO-Only: The basis info tests knowledge of "interpreting" the adherence to procedures. Also, TS 3.0.3 is typically an SRO level application of Tech Specs. Q ready for administration. MAB 11MAY2011
84	BW/A08 G2.2.25 U	N	H	2					X?					~~U~~ S	I question the plausibility of "visibility" being a TS item. Tri-nuke filters, etc, can be used to clean up visibility. I have never heard of a Tech Spec requirement based on visibility. Discuss alternatives. - Can radiation shielding be used instead? Distractors replaced. MAB 11MAY2011 The stem cues the applicant by telling the applicant that level is greater than 21.34 feet. Suggest replacing with an actual value for level. I.E. level is 22 feet or 23 feet. Indication being presented in that manner is actually how it would be in the plant – OK. MAB 11MAY2011 KA Match: TS basis info required as it pertains to canal level. SRO-Only: TS basis knowledge required, which is at the SRO level iaw SRO guidance document. Q ready for administration. MAB 11MAY2011
85	BWE08EA2.1	N	H	2										S	Question is satisfactory. KA Match: Procedure selection knowledge for LOCA CD is required. SRO-Only: Procedure selection beyond entry conditions to major EOPs is required.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
															No further changes made. Q ready for administration. MAB 11MAY2011
86	012G2.4.50	N	H	2										S	Question is satisfactory. KA Match: Alarm setpoints are used to make the operability determination on an RPS channel. The required actions are based on the operability call. SRO-Only: This is an operability call at the SRO level. No further changes made. Q ready for administration. MAB 11MAY2011
87	007A2.02 U	N	F	2									x	~~U~~ S	With plant conditions provided at 100% power, the LTOP is not required. With these conditions can it really be said that the PORV requirement for LTOP is not met? Does the plant need to be in a configuration where LTOP is required. KA Match: Procedures are being used to respond to high pressure in the PRT. SRO-Only: Tech Specs state (above the line) that the PORV is required to have a setpoint of < 535 psig. Because of this, the operability determination being based on auto operation is not at the SRO level. Is it possible to write the question for auto porv operation to not be available while at power? Are Tech Specs configured to allow for an SRO question? New Q was written. New Q sat. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
88	061A2.03 U	N	H	2									x	~~U~~ S	KA Match: Procedure use knowledge is required for loss of dc power as it relates to EFW. SRO-Only: Not SRO-only because Tech Spec 3.3.14 (above the line) states that automatic initiation is required for operability. Modified Q. OK. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
89	G2.4.30 U	B	H	2					?					~~E~~ ~~?~~ ~~U~~ S	Will supplying the entire NSD202 have any negative impacts on the exam, as far as proving info that would help answer any other questions? Evaluated – OK. MAB 11MAY2011 Reference material supporting plausibility of the distracters was not attached to the question. Have the licensee walk me through the reference

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															material that supports plausibility of the distracters. Because it is an open reference question, there needs to be a method to incorrectly apply or interpret the provided reference to arrive at each of the distracters. Licensee provided during review. OK MAB 11MAY2011 KA Match: Reportability is being tested. SRO-Only: Notifications are an SRO function. Licensee determined that there was not a correct answer when they validated the exam after their draft submittal. This caused initial rating of E to change to U. Q fixed by adding that water was injected from the BWST. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
90	064G2.1.23	N	F	2						?				~~E~~ ? S	KA Match: Tech Specs are procedures that are being used to address the conditions. Underground Power Path comes from the Keowee, therefore K/A is met. SRO-Only: Tech Spec bases information makes it SRO-only. Could KHU-1 be argued as correct because with ACB-3 closed, KHU-1 would be aligned to the underground power path? This is a concern with ensuring that there is only one correct answer. There is no risk of two correct answers. OK MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
91	016A2.01	N	H	2										S	Q is satisfactory. KA Match: TS are used to mitigate the loss of NNIS (Pzr Level). SRO-Only: Application of TS is required by using knowledge "below the line". No further changes made. Q ready for administration. MAB 11MAY2011
92	017G2.1.7	N	F	2										S	Q is satisfactory. KA Match: An operational judgment is required, based on ITMs, to enter the SAMGs. SRO-Only: SAMG entry is SRO-only knowledge.

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws						Content Flaws			U E S	Comment Explanation
					Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Min B/W	Q= K/A	SRO Only		
															No further changes made. Q ready for administration. MAB 11MAY2011
93	002G2.1.32	N	H	2										S	KA Match: RCS limitations are being explained and applied with the time to boil calculation. SRO-Only: I have a question as to whether this is an SRO-only task. Further information was supplied that supports this as being an SRO-only function at Oconee. No further changes made. Q ready for administration. MAB 11MAY2011
94	G2.1.35	N	F	2										~~E~~ S	The "or" in "D" has a bold underline. The other answer choices do not utilize a bold underline. Do the Reactor Building SRO and Refueling Building SRO have identical qualifications and/or could they have identical qualifications? If so, could either one fill the SLC requirement? Discuss to ensure only one correct answer. KA Match: Q requires SRO responsibility knowledge for fuel handling. SRO-Only: Knowledge being tested is specific to the SRO level of responsibility. The licensee incorporated NRC comments. They also requested changes to aspects of the question that they submitted with the draft submittal. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
95	G2.2.15	B	F	2					x					~~U~~ ? S	Does adding water to the 1&2 SFPs from the 2A BHUT require control room switch manipulations? If so, why would it be reasonable to think that the WCC SRO would have the responsibility for the evolution? Accepted licensee's explanation. MAB 11MAY2011 KA Match: Equipment control and knowledge of configuration control protocols is being tested. SRO-Only: Knowledge is directly related to SRO function. No further changes made. Q ready for administration. MAB 11MAY2011
96	G2.2.19	N	F	2					x					~~U~~	Feedwater flow is being affected. It is only practical that this work must be

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
	U													S	coordinated closely with the control room. The second part of "A" and "C" are likely not plausible. Entire Q replaced. MAB 11MAY2011 Q ready for administration. MAB 11MAY2011
97	G2.3.13	N	H	2										S	Q is satisfactory. KA Match: Rad Monitor indications as they pertain to refueling is required to answer the question. SRO-Only: Administrative refueling knowledge for this question is at the SRO level. No further changes made. Q ready for administration. MAB 11MAY2011
98	G2.3.14	B	F	2						x				~~E~~ ~~2~~ S	How long would the IV take? Would a general dose rate of 878 mr/hr result in getting more than 10 mrem? If a worker were to receive dose at the general area rate, he would need to perform the IV in less than 41 seconds while receiving dose at that rate. Are we at risk for having two correct answers? Determined that 41 seconds was realistic if the location was known. MAB 11MAY2011 KA Match: Radiation control knowledge is required to answer the question. SRO-Only: Waiving IVs is an SRO job responsibility. No further changes made. Q ready for administration. MAB 11MAY2011
99	G2.4.29 U	N	F	2					x					~~U~~ S	"A" and "C" are essentially different versions of the same answer. Authority to make E-Plan classifications always lies only with the OSM. "A" declares the event for one unit and "C" essentially makes a classification decision for ALL units. Licensee agreed and corrected. MAB 11MAY2011 KA Match: E-Plan EC actions are being tested. SRO-Only: The type of information being tested is SRO if only the distracters were plausible. Q ready for administration. MAB 11MAY2011

Written Exam Review Worksheet
Oconee 2011-301

Q#	K/A#	B M N	L O K	L O D	Psychometric Flaws: Stem Focus	Cues	T/F	1 Non Cred Dist	>1 Non Cred Dist	Partial	Content Flaws: Min B/W	Q= K/A	SRO Only	U E S	Comment Explanation
100	G2.4.9	B	F	2										~~E~~ S	How do SF-1 and 2 interact with the LPI pumps? Have the licensee help me understand their basis for plausibility. They have no interaction. Distractors changed. MAB 11MAY2011 KA Match: Shutdown mitigation strategy knowledge is required to arrive at the correct answer. SRO-Only: The basis for the actions are being tested. Q ready for administration. MAB 11MAY2011

Facility: OCONEE Date of Exam: MAY 2011 Exam Level: RO [X] SRO [X]

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

	Printed Name/Signature	Date
a. Grader	FRANK J. EHRHARDT / Frank J. Ehrhardt	05/18/2011
b. Facility Reviewer(*)	N/A	N/A
c. NRC Chief Examiner (*)	MARK A. BATES / Mark A. Bates	05/18/2011
d. NRC Supervisor (*)	MALCOLM T. WIDMANN / Malcolm T. Widmann	05/18/2011

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

FINAL SAMPLE

PLAN CAN BE

REVIEWED BY COMBINING

THE DRAFT APPROVED

SAMPLE PLAN AND

THE ES-401-4.