

Facility: 2011 Sequoyah Retake - Operating Date of Examination: 4/12-13/2011
 Examinations Developed by: Facility NRC
Operating Test

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	
-120	3. Facility contact briefed on security and other requirements (C.2.c)	
-120	4. Corporate notification letter sent (C.2.d)	6 L
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	6 L
{-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)	6 L
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	6 L
{-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 reference materials due (C.1.e, f, g and h; C.3.d)	6 L
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	6 L
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	6 L
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	6 L
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	6 L
-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 4; ES-202, C.2.e; ES-204)	6 L
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	N/A
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	6 L

* 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.

Final

Facility: Sequoyah Nuclear Station 1 & 2		Date of Examination: 04/12/2011		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	NA	NA	N/A
	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.	NA	NA	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	NA	N/A	
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	NA	NA	
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	NA	N/A	
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity, and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s), and that scenarios will not be repeated on subsequent days.	NA	N/A	
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	NA	N/A	Y
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.	OK	Time	6.2
	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	OK	Time	6.2
	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.	OK	Time	6.2
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	OK	Time	6.2
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	OK	Time	6.2
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	OK	Time	6.2
	d. Check for duplication and overlap among exam sections.	OK	Time	6.2
	e. Check the entire exam for balance of coverage.	OK	Time	6.2
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	OK	Time	6.2
a. Author	Michael Buckner / <i>Michael Buckner</i>	Date		4/4/2011
b. Facility Reviewer (*)	Teri Conner / <i>Teri Conner</i>	Date		4/12/2011
c. NRC Chief Examiner (#)	<i>Edwin G. Jr. Edwards</i>	Date		4/12/2011
d. NRC Supervisor	<i>MARK FRANK</i>	Date		4/12/2011
Note:	# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines			

Final

Facility: Sequoyah Nuclear Station 1 & 2		Date of Examination: 04/12/2011		Operating Test Number: 2011-301	
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).	<i>ABC</i>	<i>TRC</i>	<i>6/2</i>	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	<i>ABC</i>	<i>TRC</i>	<i>6/2</i>	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	<i>ABC</i>	<i>TRC</i>	<i>6/2</i>	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	<i>ABC</i>	<i>TRC</i>	<i>6/2</i>	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	<i>ABC</i>	<i>TRC</i>	<i>6/2</i>	
2. Walk-Through Criteria		--	--	--	
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> • initial conditions • initiating cues • references and tools, including associated procedures • reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee • operationally important specific performance criteria that include: <ul style="list-style-type: none"> – detailed expected actions with exact criteria and nomenclature – system response and other examiner cues – statements describing important observations to be made by the applicant – criteria for successful completion of the task – identification of critical steps and their associated performance standards – restrictions on the sequence of steps, if applicable 	<i>ABC</i>	<i>TRC</i>	<i>6/2</i>	
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.	<i>ABC</i>	<i>TRC</i>	<i>6/2</i>	
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.		<i>NA</i>	<i>S/K</i>	<i>N/A</i>	
	Printed Name / Signature	Date			
a.	Author <u>Michael Buckner</u> <i>Michael Buckner</i>	<u>4/11/2011</u>			
b.	Facility Reviewer(*) <u>Teri Conner</u> <i>Teri Conner</i>	<u>4/12/2011</u>			
c.	NRC Chief Examiner (#) <u>Edwin Lee, Jr.</u> <i>Edwin Lee, Jr.</i>	<u>4/12/2011</u>			
d.	NRC Supervisor <u>MARK FRANCE</u> <i>[Signature]</i>	<u>4/12/2011</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 04/11/2011 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 04/11/2011. 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.	Michael Buckner	Exam Project Lead	<i>Michael Buckner</i>	2/3/2011	<i>Michael Buckner</i>	4/13/2011	
2.	OWEN B. TRIOLO	EXAM DEVELOPER	<i>Owen B. Triolo</i>	2/3/2011	<i>Owen B. Triolo</i>	4/13/2011	
3.	STEVEN V. SMITH	EXAM TEL. MAN. REP.	<i>SV Smith</i>	2/3/2011	<i>SV Smith</i>	4/13/2011	
4.	BROOKS J. MATTHEWSON	SIM ENGINEER	<i>Brooks Matthewson</i>	2/8/2011	<i>Brooks Matthewson</i>	4/14/2011	*
5.	JAMES D. KNIGHT	SIM. ENGINEER	<i>James D. Knight</i>	2/8/2011	<i>James D. Knight</i>	4/13/2011	
6.	MIKE BERCHER	IM Foreman	<i>Mike Bercher</i>	2/4/11	<i>Mike Bercher</i>	4/15/11	
7.	RUSSELL JAPLIN	CORP EXAM MGR	<i>Russell Japlin</i>	2/11/11	<i>Russell Japlin</i>	4/15/11	
8.	TERI CONNER	UNIT SUPERVISOR	<i>Teri Conner</i>	2/11/11	<i>Teri Conner</i>	4/13/11	
9.	WALTER W HARRIS	UNIT SUPERVISOR/STA	<i>Walter W Harris</i>	2/25/11	<i>Walter W Harris</i>	4/13/11	per telecon
10.	TIM RIEGER	UNIT SUP/STA	<i>Tim Rieger</i>	2/28/11	<i>Tim Rieger</i>	4/13/11	by Teri Conner
11.	KYLE C BELL	RO	<i>Kyle C Bell</i>	2/28/11	<i>Kyle C Bell</i>	4/13/11	
12.	WILLIAM R LYONS	RO	<i>WR Lyons</i>	2/28/11	<i>WR Lyons</i>	4/13/11	
13.	CHRISTOPHER HAWES	ILT SUPERVISOR	<i>Chris Hawes</i>	4/4/11	<i>Chris Hawes</i>	4/13/11	
14.	AARON S. BERGROW	OPERATIONS TRAINING MANAGER	<i>Aaron S Bergrow</i>	4-8-11	<i>Aaron S Bergrow</i>	4/13/11	
15.	JAMES M CASNER	SRO	<i>James M Casner</i>	4-11-11	<i>James Casner</i>	4/27/11	* *

NOTES:

- * - Brooks Matthewson sign off per telecon on 4/14/2011 by Michael Buckner
- * * - James Casner sign off per telecon on 4/27/2011 by Michael Buckner

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 04/11/2011 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 04/11/2011. 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.	Allen Thurman	UO/RO	<i>Allen Thurman</i>	4/11/11	<i>Allen Thurman</i>	4/11/11	Allen Thurman per telecon 4/13/2011
2.	James N. Siler	UO/RO	<i>James N. Siler</i>	4/11/11	<i>James N. Siler</i>	4/11/11	Michael Busch 4/11/2011
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12.							
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14.							
15.							

NOTES:

* signed off per telecon 4/13/2011 Michael Busch

Final

Facility: Sequoyah Nuclear Station 1 & 2 Date of Examination: 4/12/2011
 Exam Level: RO SRO-I SRO-U Operating Test No: 2011-301

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. Realign Control Rod H-6 K/A 001 A2.03 (3.5/4.2)	N, A, S	1
b. Align ECCS Pumps to the Containment Sump K/A 006 A4.07 (4.4/4.4)	M, S, L	2
c. Isolate the Ruptured Steam Generator (With MSIV Failure to Close) K/A EPE 038 EA1.32 (4.6/4.7)	D, A, S, L	3
d. Start a Reactor Coolant Pump K/A APE 015/017 AA1.03 (3.7/3.8)	D, A, S, L	4P
e. Respond to ERCW Pump Trip K/A 076 A2.01 (3.5/3.7)	M, S	4S
f. Transfer 1A-A 6.9KV SD Bd From Alternate to Normal K/A 064 A4.01 (4.0/4.3)	M, A, S	6
g. Respond to a Failure of Power Range Instrument N-44 K/A 015 A3.02 (3.7/3.9)	M, A, S	7

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

h. Boron Flowpath Alignment K/A 004 A2.25 (3.8/4.3)	N, R	2
i. Reset the TD AFW Pump Locally K/A 061 A2.04 (3.4/3.8)	M, A, E, R	6
j. Respond to Decreasing RCS Pressure and Level From the Aux. Control Room K/A APE 068 AA1.12 (4.4/4.4)	D, E	8

@ 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
(E)ngineered 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	

a. Realign Control Rod H-6

While withdrawing control rod H-6 to realign it with Control Bank A, a control rod in Bank D becomes misaligned from its bank by more than 50 steps. The examinee will stop aligning the control rod and determines that a Reactor Trip is required.

b. Transfer to Cold Leg Recirc

The examinee will isolate the ECCS pump suction from the RWST following a LOCA during the performance of ES-1.3 transfer to RHR Containment Sump.

c. Isolate the Steam Generator Tube Rupture (With MSIV Failure to Close)

The examinee will attempt to isolate a ruptured steam generator using the ruptured steam generator MSIV. The ruptured steam generator MSIV will fail to close so the examinee will close all intact MSIV's and the alternate flowpath isolation valves.

d. Start a Reactor Coolant Pump

The examinee will start a Reactor Coolant Pump (RCP) while in MODE 3. Shortly after starting the pump, a high motor winding condition develops requiring a manual trip of the RCP.

e. Respond to ERCW Pump Trip

While responding to an ERCW pump trip, the examinee will manually start an ERCW pump.

f. Transfer 1A-A 6.9KV SD Bd From Alternate to Normal

While restoring from maintenance, the examinee will attempt to transfer the 6.9 kv Shutdown Board from the alternate to the normal source. While transferring, the normal supply breaker will fail to close de-energizing the 1A-A 6.9 kv bus. The examinee will manually start the 1A-A EDG to supply power to the 1A-A 6.9 kv Shutdown Board.

g. Respond to a Failure of Power range Instrument N-44.

The examinee will respond to a failure high of Power Range Monitor, N-44, place rod control to manual, defeat its control functions, and prepare for its removal from service.

h. Uncontrolled Boron Dilution Flowpath Isolation

The examinee will perform a Boric Acid Flow Paths Valve Position Verification system alignment/verification.

i. Reset the TD AFW Pump Locally

During a Station Blackout, the examinee will shift control power and reset the overspeed trip for the Unit 1 Turbine Driven Auxiliary Feed pump

j. Respond to Decreasing RCS Pressure and Level From the Aux. Control Room

While responding to lowering RCS pressure during a Control Room abandonment situation, the examinee will take local control of the Pressurizer PORV's at the Auxiliary Control Panel and shut the PORV's.

Final

Facility: Sequoyah Nuclear Station 1 & 2Date of Examination: 4/12/2011Exam Level: RO SRO Operating Test No: 2011-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	R, M	Calculate Subcooling Margin K/A 2.1.45 (4.3)
Conduct of Operations	R, N	Evaluate Shift Daily Surveillance Log Mode One K/A 2.1.18 (3.8)
Equipment Control	R, D	Evaluate Arc Flash Clothing Requirements and Tag Verification Requirements during a Clearance Placement. K/A 2.2.13 (3.8)
Radiation Control	R, M	Pre Job Analysis for Emergent Work in the RCA. K/A 2.3.13 (3.8)
Emergency Procedures/Plan	R, M	Evaluate Conditions For Emergency Classification K/A 2.4.41 (4.6)

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)

A.1.a Calculate Subcooling Margin

During a Control Abandonment situation, the examinee will determine actual subcooling margin based on a given set of parameters and calculate results using Steam Tables. Based on the result of the calculation, the examinee will make the decision that RCP's can be stopped based on adequate subcooling.

A.1.b Evaluate Shift Daily Log During Mode One

The examinee will evaluate the data provided in the daily shift log to determine if the data meets the administrative and tech spec acceptance criteria.

A.2 Evaluate Ace Flash Clothing Requirements and Tag Verification Requirements during a Clearance Placement

The examinee will determine the minimum protective clothing requirements for manipulating electrical breakers during placement of a clearance and the verification requirements for the placing of the clearance tags in preparation for pre-job brief.

A.3 Pre Job Analysis for Emergent Work in the RCA

Acting as the Outage Work Control SRO, the examinee will review an emergent task in the RCA by utilizing survey maps. The examinee will determine the anticipated dose and conclude that the evolution is high risk, based on the anticipated dose.

A.4 Evaluate change in conditions for Emergency Classification upgrade.

Acting as the Site Emergency Director, and given a set of initial conditions, the examinee will classify and complete a state emergency notification form.