

Facility: 2010 Watts Bar

Date of Examination: 8/23/2010

Examinations Developed by: Facility

NRC

Written / 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)	11/18/2009
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	3/24/2010
-120	3. Facility contact briefed on security and other requirements (C.2.c)	3/24/2010
-120	4. Corporate notification letter sent (C.2.d)	3/29/2010
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	7/09/2010
{-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)	6/09/2010
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	6/19/2010
{-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)	7/9/2010 (7/02/2010)
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	7/23/2010
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	8/9/2010
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	8/9/2010
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	8/9/2010
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	8/16/2010
-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)	8/16/2010
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	8/16/2010
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	8/16/2010

* 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.

Facility: Watts Bar		Date of Examination: 08/23/ 2010		
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.	n/a	n/a	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.	n/a	n/a	n/a
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	n/a	n/a	n/a
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	n/a	n/a	n/a
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.	PR	SRS	AS
	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.	PR	SRS	AS
	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.	PR	SRS	AS
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.	PR	SRS	AS
	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	PR	SRS	AS
	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.	PR	SRS	AS
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.	PR	SRS	AS
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	PR	SRS	AS
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	PR	SRS	AS
	d. Check for duplication and overlap among exam sections.	PR	SRS	AS
	e. Check the entire exam for balance of coverage.	PR	SRS	AS
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	PR	SRS	AS
a. Author <u>John B. Roden /</u> b. Facility Reviewer (*) <u>Steven R. Smith /</u> c. NRC Chief Examiner (#) <u>GERARD W. LASKA /</u> d. NRC Supervisor <u>MALCOLM T. WIDMANN /</u>		Printed Name/Signature Date 8/12/10 8/12/10 8/12/2010 08/16/10		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines				

* OUTLINE FOR Written Exam provided by NRC to Licensee on 11/18/2009

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of Aug 20 10 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 8/23-9/22/10. 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. Darrell Hensley	Exam Lead	<i>Darrell Hensley</i>	11/18/09			SEE PAGE 1A
2. Dale Hoffman	Exam Writer	<i>Dale Hoffman</i>	1/7/10	<i>Dale Hoffman</i>	9/27/10	
3. JOHN B. ROSEN	EXAM WRITER	<i>John B. Rosen</i>	1/7/10	<i>John B. Rosen</i>	9/22/10	9/22/10
4. ROBERT N. GOOD	SIMULATOR MGR	<i>Robert N. Good</i>	1/7/10	<i>Robert N. Good</i>	9/23/10	
5. William G. Buehly	Simulator Eng	<i>William G. Buehly</i>	1/7/10	<i>William G. Buehly</i>	9/23/10	
6. STEVEN T. HEDRICK	STMF	<i>Steven T. Hedrick</i>	1/8/10	<i>Steven T. Hedrick</i>	9/27/2010	
7. Edward J. Kneblow	SPIN Eng -	<i>Edward J. Kneblow</i>	1/16/10	<i>Edward J. Kneblow</i>	9/23/2010	
8. Lukas S. Barnes	Reactor Engineer	<i>Lukas S. Barnes</i>	03/15/10	<i>Lukas S. Barnes</i>	09/24/10	
9. Stewart R. Smith	OPS	<i>Stewart R. Smith</i>	3-5-10	<i>Stewart R. Smith</i>	9-22-10	
10. Ronald E. Crews	OPS	<i>Ronald E. Crews</i>	5/11/10	<i>Ronald E. Crews</i>	8-22-10	
11. Steve Russell	OTPS Exelon / Corp Oversight	<i>Steve Russell</i>	5/11/10			SEE PAGE 1B
12. Paul DiGiovanna	INPO Sr. Evaluator	<i>Paul DiGiovanna</i>	5/11/10			SEE PAGE 1C
13. MICHAEL A. LEWIS	INPO ACCREA TEAM MANAGER	<i>Michael A. Lewis</i>	5/11/10			SEE PAGE 1D
14. Adam Newport	UO validator	<i>Adam Newport</i>	5/19/10	<i>Adam Newport</i>	9/22/10	
15. Gary Thompson	UO	<i>Gary Thompson</i>	5/19/10	<i>Gary Thompson</i>	9/23/10	

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 Aug 20/10 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 9/23-9/25/10. 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. Darrell Hensley	Exam Lead	<i>Darrell Hensley</i>	11/12/09	<i>Darrell Hensley</i>	9/23/10	
2. Dale Hoffman	Exam Writer	<i>Dale Hoffman</i>	1/7/10			
3. John B. Roben	EXAM WRITER	<i>John B. Roben</i>	1/7/10	<i>John B. Roben</i>	9/23/10	
4. ROBERT N. GOOD	SIMULATOR MGR	<i>Robert N. Good</i>	1/7/10	<i>Robert N. Good</i>	9/23/10	
5. William G. Busby	Simulator Eng	<i>William G. Busby</i>	1/7/10	<i>William G. Busby</i>	9/23/10	
6. STEVEN T. HEDRICK	STAFF	<i>Steven T. Hedrick</i>	1/7/10	<i>Steven T. Hedrick</i>	9/23/10	
7. Edward J. Bredbeck	STAFF Eng -	<i>Edward J. Bredbeck</i>	1/7/10	<i>Edward J. Bredbeck</i>	9/23/10	
8. Luther S. Brown	Reader Engineer	<i>Luther S. Brown</i>	1/7/10	<i>Luther S. Brown</i>	9/23/10	
9. STANLEY R. SMITH	OPS	<i>Stanley R. Smith</i>	1/7/10	<i>Stanley R. Smith</i>	9/23/10	
10. RONALD E. CRUIS	OPS	<i>Ronald E. Cruis</i>	1/7/10	<i>Ronald E. Cruis</i>	9/23/10	
11. Steve Russell	ATPS Exam / Computer	<i>Steve Russell</i>	1/7/10	<i>Steve Russell</i>	9/23/10	
12. Paul O'Brien	INFO Sr. Evaluation	<i>Paul O'Brien</i>	1/7/10	<i>Paul O'Brien</i>	9/23/10	
13. MICHAEL A. CLEVELAND	INFO ACCESS TEAM MANAGER	<i>Michael A. Cleveland</i>	1/7/10	<i>Michael A. Cleveland</i>	9/23/10	
14. Adam Newport	INFO Validator	<i>Adam Newport</i>	1/7/10	<i>Adam Newport</i>	9/23/10	
15. Gary Thompson	INFO	<i>Gary Thompson</i>	1/7/10	<i>Gary Thompson</i>	9/23/10	

NOTES:

1. Pre-Examination

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2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 8/22-9/2/10. 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. Darrell Hensley	Exam Lead	<i>Darrell Hensley</i>	11/18/09		
2. Dale Hoffman	Exam Writer	<i>Dale Hoffman</i>	1/7/10		
3. JOHN B. RODEV	EXAM WRITER	<i>John B. Rodev</i>	1/7/10	<i>John B. Rodev</i>	9/22/10
4. ROBERT N. GOOD	SIMULATOR MGR	<i>Robert N. Good</i>	1/7/10	<i>Robert N. Good</i>	9/23/10
5. William G. Bugly	Simulator Eng	<i>William G. Bugly</i>	1/7/10	<i>William G. Bugly</i>	9/23/10
6. Steven T. Hedrick	STMF	<i>Steven T. Hedrick</i>	1/10/10		
7. Edward J. Koblencz	STMF Eng -	<i>Edward J. Koblencz</i>	1/10/10		
8. Lukas S. Barnes	Reader Engineer	<i>Lukas S. Barnes</i>	1/10/10		
9. Steven R. Smith	OPS	<i>Steven R. Smith</i>	3-15-10	<i>Steven R. Smith</i>	9-22-10
10. Ronald E. Cross	OPS	<i>Ronald E. Cross</i>	5/11/10	<i>Ronald E. Cross</i>	8-22-10
11. Steve Russell	ATPS Exelon / Corp Oversight	<i>Steve Russell</i>	5/11/10	<i>Steve Russell</i>	9/23/10
12. Paul O'Gorman	INPO Sr. Evaluator	<i>Paul O'Gorman</i>	5/11/10	<i>Paul O'Gorman</i>	
13. MICHAEL A. LEWIS	INPO ACCESS TEAM manager	<i>Michael A. Lewis</i>	5/11/10		
14. Adam Newport	UO validator	<i>Adam Newport</i>	5/19/10	<i>Adam Newport</i>	9/23/10
15. Gary Thompson	UO	<i>Gary Thompson</i>	5/19/10	<i>Gary Thompson</i>	9/23/10

NOTES:

TOTAL P.01

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 Aug 2010 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 8/23-9/1/10. 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. <u>Darrell Hankley</u>	<u>Exam Lead</u>	<u>Darrell Hankley</u>	<u>11/18/09</u>			
2. <u>Mike Hoffmann</u>	<u>Exam Writer</u>	<u>Mike Hoffmann</u>	<u>1/7/10</u>			
3. <u>JOHN B. ROBERTS</u>	<u>EXAM WRITER</u>	<u>John B. Roberts</u>	<u>1/7/10</u>	<u>John B. Roberts</u>	<u>9/22/10</u>	
4. <u>ROBERT N. GOOD</u>	<u>SIMULATOR MGR</u>	<u>Robert N. Good</u>	<u>1/7/10</u>	<u>Robert N. Good</u>	<u>9/23/10</u>	
5. <u>William G. Buehly</u>	<u>Simulator Eng</u>	<u>William G. Buehly</u>	<u>1/16/10</u>	<u>William G. Buehly</u>	<u>9/23/10</u>	
6. <u>STEVEN T. HEDRICK</u>	<u>STIME</u>	<u>Steven T. Hedrick</u>	<u>1/16/10</u>			
7. <u>Edward J. Kibler</u>	<u>STIME Eng</u>	<u>Edward J. Kibler</u>	<u>1/16/10</u>			
8. <u>LEON S. BROWN</u>	<u>Power Engineer</u>	<u>Leon S. Brown</u>	<u>1/16/10</u>			
9. <u>STEVEN R. SMITH</u>	<u>OPS</u>	<u>Steven R. Smith</u>	<u>3-15-10</u>	<u>Steven R. Smith</u>	<u>9-22-10</u>	
10. <u>RONALD E. CRAWF</u>	<u>OPS</u>	<u>Ronald E. Crawford</u>	<u>5/11/10</u>	<u>Ronald E. Crawford</u>	<u>9-22-10</u>	
11. <u>STEVE RUSSELL</u>	<u>ATPSE Exam / Corp Oversight</u>	<u>Steve Russell</u>	<u>5/11/10</u>			
12. <u>PAUL D. GIOVANNI</u>	<u>INFO Sr. Evaluator</u>	<u>Paul D. Giovanni</u>	<u>5/11/10</u>	<u>Paul D. Giovanni</u>	<u>9/23/10</u>	
13. <u>MICHAEL A. LEWIS</u>	<u>INFO ACCESS TEAM Manager</u>	<u>Michael A. Lewis</u>	<u>5/11/10</u>			
14. <u>Adam Nason</u>	<u>UD Validator</u>	<u>Adam Nason</u>	<u>5/19/10</u>	<u>Adam Nason</u>	<u>9/23/10</u>	
15. <u>GARY THOMPSON</u>	<u>UD</u>	<u>Gary Thompson</u>	<u>5/19/10</u>	<u>Gary Thompson</u>	<u>9/23/10</u>	

NOTES:

1. Pre-Examination

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2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 8/23-9/23/10. 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. <u>Darrell Henley</u>	<u>Exam Lead</u>	<u>Darrell Henley</u>	<u>11/18/09</u>			
2. <u>Dale Hoffman</u>	<u>Exam Writer</u>	<u>Dale Hoffman</u>	<u>11/7/10</u>			
3. <u>JOHN B. ROGER</u>	<u>EXAM WRITER</u>	<u>John B. Roger</u>	<u>11/7/10</u>	<u>John B. Roger</u>	<u>9/22/10</u>	
4. <u>ROBERT N. GOOD</u>	<u>SIMULATOR MGR</u>	<u>Robert N. Good</u>	<u>11/7/10</u>	<u>Robert N. Good</u>	<u>9/23/10</u>	
5. <u>William G. Buzby</u>	<u>Simulator Eng</u>	<u>William G. Buzby</u>	<u>11/10</u>	<u>William G. Buzby</u>	<u>9/23/10</u>	
6. <u>STANLEY T. HEDRICK</u>	<u>STMF</u>	<u>Stanley T. Hedrick</u>	<u>11/10</u>			
7. <u>Edward J. Kuchuk</u>	<u>STMF Eng</u>	<u>Edward J. Kuchuk</u>	<u>11/10</u>			
8. <u>Lukas S. Roper</u>	<u>Reactor Engineer</u>	<u>Lukas S. Roper</u>	<u>08/16/10</u>			
9. <u>Stanley R. Smith</u>	<u>OPS</u>	<u>Stanley R. Smith</u>	<u>3-15-10</u>	<u>Stanley R. Smith</u>	<u>9-22-10</u>	
10. <u>Ronald E. Crows</u>	<u>OPS</u>	<u>Ronald E. Crows</u>	<u>5/11/10</u>	<u>Ronald E. Crows</u>	<u>9-22-10</u>	
11. <u>Steve Russell</u>	<u>ATPS Examen / Corp Oversight</u>	<u>Steve Russell</u>	<u>5/11/10</u>			
12. <u>Paul O. Giovanna</u>	<u>INPO Sr. Evaluator</u>	<u>Paul O. Giovanna</u>	<u>5/11/10</u>			
13. <u>MICHAEL A. LEWELLYN</u>	<u>INPO ACCESS TEAM MANAGER</u>	<u>Michael A. Lewellyn</u>	<u>5/11/10</u>	<u>Michael A. Lewellyn</u>	<u>9/23/10</u>	
14. <u>Adam Newport</u>	<u>NO validator</u>	<u>Adam Newport</u>	<u>5/19/10</u>	<u>Adam Newport</u>	<u>9/22/10</u>	
15. <u>Mary Thompson</u>	<u>NO</u>	<u>Mary Thompson</u>	<u>5/19/10</u>	<u>Mary Thompson</u>	<u>9/23/10</u>	

NOTES:

1. Pre-Examination

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2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 8/23-9/2/10. 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. <u>Gregory Evans</u>	<u>SRO OPS sup supt</u>	<u>[Signature]</u>	<u>5/20/10</u>	<u>[Signature]</u>	<u>9-23-10</u>
2. <u>Billy Johnson</u>	<u>SM</u>	<u>[Signature]</u>	<u>5/21/10</u>	<u>[Signature]</u>	<u>9-23-10</u>
3. <u>Thomas Huta</u>	<u>Unit Operator</u>	<u>[Signature]</u>	<u>5/23/10</u>	<u>[Signature]</u>	<u>9-22-10</u>
4. <u>Scott Silvers</u>	<u>SRO Cert</u>	<u>[Signature]</u>	<u>5/28/2010</u>	<u>[Signature]</u>	<u>9/27/2010</u>
5. <u>Roy Bowring</u>	<u>SRO</u>	<u>[Signature]</u>	<u>9/29/2010</u>	<u>[Signature]</u>	<u>9/29/2010</u>
6. <u>Johanne D Harris</u>	<u>RO</u>	<u>[Signature]</u>	<u>5/30/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
7. <u>Chris Rice</u>	<u>SRO</u>	<u>[Signature]</u>	<u>08/04/10</u>	<u>[Signature]</u>	<u>08-28/10</u>
8. <u>Russell Joplin</u>	<u>Programmer Exams</u>	<u>[Signature]</u>	<u>6/7/10</u>	<u>[Signature]</u>	<u>SEE PAGE 2A</u>
9. <u>MARTIN MUMER</u>	<u>SRO VALIDATOR</u>	<u>[Signature]</u>	<u>6/15/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
10. <u>Brian Collins</u>	<u>SRO VALIDATOR</u>	<u>[Signature]</u>	<u>6-11-10</u>	<u>[Signature]</u>	<u>9/23/2010 SEE PAGE 2B</u>
11. <u>BRYAN MCLENNAM</u>	<u>SRO</u>	<u>[Signature]</u>	<u>6-21-10</u>	<u>[Signature]</u>	<u>9/22/10</u>
12. <u>JAMES MARTIN</u>	<u>RC</u>	<u>[Signature]</u>	<u>6-23-10</u>	<u>[Signature]</u>	<u>9-23-10</u>
13. <u>NILS C STENGEL</u>	<u>Simulator Engineer</u>	<u>[Signature]</u>	<u>6-28-10</u>	<u>[Signature]</u>	<u>9/22/10</u>
14. <u>TIMOTHY D. LONG</u>	<u>SRO</u>	<u>[Signature]</u>	<u>8-2-10</u>	<u>[Signature]</u>	<u>9/23/10</u>
15. <u>Sean M. Mobley</u>	<u>RO</u>	<u>[Signature]</u>	<u>8-2-10</u>	<u>[Signature]</u>	<u>9/24/10</u>

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 Aug 2010 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 8/23-9/1/10 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. <u>Gregory Evans</u>	<u>SRO Ops sup supt</u>	<u>[Signature]</u>	<u>5/20/10</u>	<u>[Signature]</u>	<u>9-23-10</u>
2. <u>Billy Johnson</u>	<u>SM</u>	<u>[Signature]</u>	<u>5/24/10</u>	<u>[Signature]</u>	<u>9-23-10</u>
3. <u>Thomas Hake</u>	<u>Unit Operator</u>	<u>[Signature]</u>	<u>5/24/10</u>	<u>[Signature]</u>	<u>9-22-10</u>
4. <u>Scott Silvers</u>	<u>SRO Cert</u>	<u>[Signature]</u>	<u>5/24/10</u>	<u>[Signature]</u>	<u>9/23/2010</u>
5. <u>Roy Bowring</u>	<u>SRO</u>	<u>[Signature]</u>	<u>5/24/10</u>	<u>[Signature]</u>	<u>9/23/2010</u>
6. <u>John D Harris</u>	<u>RO</u>	<u>[Signature]</u>	<u>5/24/10</u>	<u>[Signature]</u>	<u>9/23/2010</u>
7. <u>Chris Rice</u>	<u>SRO</u>	<u>[Signature]</u>	<u>5/24/10</u>	<u>[Signature]</u>	<u>9/23/2010</u>
8. <u>Russell Joplin</u>	<u>Programmer Exams</u>	<u>[Signature]</u>	<u>6/2/10</u>	<u>[Signature]</u>	<u>9/23/2010</u>
9. <u>Wayne Minor</u>	<u>SRO VALIDATOR</u>	<u>[Signature]</u>	<u>6/2/10</u>	<u>[Signature]</u>	<u>9/23/2010</u>
10. <u>Joe Collins</u>	<u>SRO VALIDATOR</u>	<u>[Signature]</u>	<u>6/2/10</u>	<u>[Signature]</u>	<u>9/23/2010</u>
11. <u>Brian McElroy</u>	<u>SRO</u>	<u>[Signature]</u>	<u>6-2-10</u>	<u>[Signature]</u>	<u>9/23/10</u>
12. <u>James Martin</u>	<u>RO</u>	<u>[Signature]</u>	<u>6-2-10</u>	<u>[Signature]</u>	<u>9/23/10</u>
13. <u>Nils C Stengel</u>	<u>Simulator Engineer</u>	<u>[Signature]</u>	<u>6-23-10</u>	<u>[Signature]</u>	<u>9/23/10</u>
14. <u>Timothy D. Long</u>	<u>SRO</u>	<u>[Signature]</u>	<u>6-23-10</u>	<u>[Signature]</u>	<u>9/23/10</u>
15. <u>Sean M. Mobley</u>	<u>RO</u>	<u>[Signature]</u>	<u>8-2-10</u>	<u>[Signature]</u>	<u>9/23/10</u>

NOTES:

File Examination Security Agreement - Message (HTML)

Message Insert Options Format Text Adobe PDF

Clipboard Paste Undo Copy Format Painter Font Size 10 Font Color Basic Text Address Check Book Names Attach File Attach Item Card* Business Calendar Signature Follow Up* Options High Importance Low Importance Spelling Proofing

This message will be sent via Microsoft Exchange.

From: Robert Collins [mailto:collinsrobert67@gmail.com]
Sent: Thursday, September 23, 2010 1:54 PM
To: Morris, Helen L
Subject: Re: Examination Security Agreement

Alma received per telecon 9/28/2010 I

Helen

My cell is not allowing me to dial out of the country for some reason.
Tel Ron, No one got any information from me pertaining to the exam.
If he wants he can try to call me at: 0828014806
I miss you guys!

Rob

On Thu, Sep 23, 2010 at 5:50 PM, Morris, Helen L <hlmorris@tva.gov> wrote:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of AUG 2010 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 8/13-14/10. 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. <u>Roger W. Dittmer</u>	<u>SRO - UNIT SUPERVISOR</u>	<u>[Signature]</u>	<u>8/10/10</u>	<u>[Signature]</u>	<u>9/2/10</u>
2. <u>TERRY SEYLOW</u>	<u>SRO - UNIT SUPERVISOR</u>	<u>[Signature]</u>	<u>8/16/10</u>	<u>[Signature]</u>	<u>9/22/10</u>
3. <u>Jeff Kri</u>	<u>SRO - Unit Supervisor</u>	<u>[Signature]</u>	<u>8-19-10</u>	<u>[Signature]</u>	<u>9-22-10</u>
4. <u>BRIAN KAYE</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/21/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
5. <u>MATT SCHMIDT</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/21/10</u>	<u>[Signature]</u>	<u>9/27/2010</u>
6. <u>Harry Vailes</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9-22-10</u>
7. <u>Curtis Peterson</u>	<u>SRO - INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
8. <u>MICHAEL PETERSEN</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
9. <u>Michael Vark</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
10. <u>JOHN DALTON</u>	<u>ILT SUPERVISOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
11. <u>William Thompson</u>	<u>TRNG MGR</u>	<u>[Signature]</u>	<u>8-23-10</u>	<u>[Signature]</u>	<u>9/23/10</u>
12. <u>Gregory Wallace</u>	<u>OPS - US</u>	<u>[Signature]</u>	<u>8-24-10</u>	<u>[Signature]</u>	<u>9-23-10</u>
13. <u>Douglas M. How</u>	<u>SRO - SM</u>	<u>[Signature]</u>	<u>9-3-10</u>	<u>[Signature]</u>	<u>9/22/10</u>
14. <u>Adam Szalas</u>	<u>WC manager</u>	<u>[Signature]</u>	<u>9/1/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
15. <u>Vernon, D.B.</u>	<u>SUP</u>	<u>[Signature]</u>	<u>9/9/2010</u>	<u>[Signature]</u>	<u>9/23/10</u>

NOTES: SEE PAGE 3 A

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 AUG 2010 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 8/13-8/14/10. 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. <u>Roger W. Dittmer</u>	<u>SRO - UNIT SUPERVISOR</u>	<u>[Signature]</u>	<u>8/10/10</u>	<u>[Signature]</u>	<u>9/24/10</u>
2. <u>TERRY KEVLOW</u>	<u>SRO - UNIT SUPERVISOR</u>	<u>[Signature]</u>	<u>8/14/10</u>		
3. <u>JOFF KRIE</u>	<u>SRO - Unit Supervisor</u>	<u>[Signature]</u>	<u>8/14/10</u>		
4. <u>BILLY KAYE</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/14/10</u>		
5. <u>MATT SCHMADKE</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/21/10</u>	<u>[Signature]</u>	<u>9-22-10</u>
6. <u>HARRY VALES</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/21/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
7. <u>CLARENCE DEWITT</u>	<u>SRO - INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9-22-10</u>
8. <u>MICHAEL PETERSEN</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
9. <u>Michael York</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
10. <u>John Dalton</u>	<u>LT SUPERVISOR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
11. <u>William Thompson</u>	<u>TRNG MGR</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
12. <u>GREGORY WALLACE</u>	<u>OPS US</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>
13. <u>Douglas M. How</u>	<u>SRO - SM</u>	<u>[Signature]</u>	<u>8/23/10</u>	<u>[Signature]</u>	<u>9-23-10</u>
14. <u>Adam Senial</u>	<u>WC member</u>	<u>[Signature]</u>	<u>9-23-10</u>	<u>[Signature]</u>	<u>9/23/10</u>
15. <u>Veronica TB</u>	<u>SUP</u>	<u>[Signature]</u>	<u>9/23/10</u>	<u>[Signature]</u>	<u>9/23/10</u>

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 8/23-9/1/10 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

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. KR SKUBISZ	US/STA		8/25/10		9/23/10	
2. M.T. McFadden	OPS MGR		8/24/10		9-23-10	
3. BILL SPRINKLE	SM		8/26/10		9/23/10	
4. Alan Hambrick	OPS Instructor		8/31/10		9/23/10	
5. NEAL SANBORN	OPS Instructor		8/31/10		9/23/10	
6. Benjamin P. Hunt	OPS SUPV		9/1/10		9/23/10	
7. DAVID R. JACKSON	US/STA		8/24/10		8/24/10	
8. Billy Johnson	SM		9/3/10		9-23-10	
9. J. S. W. T. G.	SM		9/3/10		9/23/10	
10. DEGRISSE	UP		9/3/10		9/23/10	
11. J. U. S. K. R. D.	man vic/sing		9/3/10		9/23/10	
12. Ricky C. King	Ops Instructor		9/6/10		9/22/10	
13. DANIEL W. BARRER	OPS INSTRUCTOR		9/8/10		9/23/10	
14. Josh Bowman	OPS INSTRUCTOR		9/8/10		9/24/10	
15. William Dimond	OPS Instructor		9/8/10		9/23/10	

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 9/23-9/11/10 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

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. KR SKUBISZ	US/STA		9/25/10		
2. M.T. McGowan	OPS MNGR		8/27/10		
3. BILL SPRINKLE	SM		8/26/10		9/22/10
4. Alan Hartsch	OPS Instructor		8/31/10		
5. NEAL SANBORN	OPS Instructor		8/31/10		9/22/10
6. Benjamin P. Hunt	OPS SUP		9/1/10		
7. DAVID R. JACKSON	US/STA		9/1/10		9-23-10
8. Billy Johnson	SM		9/2/10		
9. J. SWIFT	SM		9/3/10		
10. J. GRIFFIN	SM		9/3/10		9-23-10
11. J. L. SKUBISZ	OPS INSTRUCTOR		9/3/10		9/22/10
12. Ricky C. King	OPS INSTRUCTOR		9/3/10		
13. DANIEL W. BARRER	OPS INSTRUCTOR		9/3/10		
14. Josh Bowman	OPS INSTRUCTOR		9/3/10		9-23-10
15. William Diamond	OPS INSTRUCTOR		9/3/10		

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 8/23-9/12 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 8/23-9/21/10. 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. <u>Joyce N. Artis</u>	<u>UNIT SUP / STA / WCC SMO</u>	<u>Joyce N. Artis</u>	<u>9/8/10</u>	<u>Joyce N. Artis</u>	<u>9/23/10</u>
2. <u>DARRELL D. Rector</u>	<u>OPS LOR Instructor</u>	<u>DARRELL D. Rector</u>	<u>9/8/10</u>	<u>DARRELL D. Rector</u>	<u>9/23/10</u>
3. <u>Albert V. White</u>	<u>OPS LOR Instructor</u>	<u>Albert V. White</u>	<u>9/8/10</u>	<u>Albert V. White</u>	<u>9-23-10</u>
4. <u>Carl M. de Blank</u>	<u>OPS LOR Instructor</u>	<u>Carl M. de Blank</u>	<u>9/8/10</u>	<u>Carl M. de Blank</u>	<u>9/23/10</u>
5. <u>DONALD W. JAMIESON</u>	<u>SM</u>	<u>DONALD W. JAMIESON</u>	<u>9/10/10</u>	<u>DONALD W. JAMIESON</u>	<u>9/21/10</u>
6. <u>LARRY N. COLAHAN</u>	<u>US/STA</u>	<u>LARRY N. COLAHAN</u>	<u>9/10/10</u>	<u>LARRY N. COLAHAN</u>	<u>9/22/10</u>
7. <u>Terry L. Newman</u>	<u>ILT Instructor</u>	<u>Terry L. Newman</u>	<u>9/10/10</u>	<u>Terry L. Newman</u>	<u>9/21/10</u>
8. <u>Val E. Turinetti</u>	<u>Val E. Turinetti</u>	<u>Val E. Turinetti</u>	<u>9/22/10</u>	<u>Val E. Turinetti</u>	<u>9/22/10</u>
9. <u>Larry N. Colahan</u>					
10.					
11.					
12.					
13.					
14.					
15.					

NOTES:

FINAL

ES-301

Administrative Topics Outline

Form ES-301-1

Facility: Watts Bar

Date of Examination: August 2010

Examination Level: RO ☒ SRO ☐

Operating Test Number: NRC Exam 1

Administrative Topic (See Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M, R	A.1-1 Determine Values for Raising RWST Level. 2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation. (41.10 / 43.5 / 45.2 / 45.6) 4.3/4.4.
Conduct of Operations	N, R	A.1-2 Determine RCP Start Requirements. 2.1.32 Ability to explain and apply system limits and precautions. (41.10/43.2/45.12) 2.7/3.5.
Equipment Control	M, R	A.2 Review 1-SI-0-4, "Monthly Surveillances." 2.2.12 Knowledge of surveillance procedures. (41.10 / 45.13) 3.7/4.1.
Radiation Control	M, R	A.3 Determine if Stay Times Exceed Emergency Exposure Limits. 2.3.4 Knowledge of radiation exposure limits under normal or emergency conditions. (41.12 / 43.4 / 45.10) 3.2/3.7.
Emergency Procedures / Plan		Not Required.

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)

RO Admin JPM Summary

- A.1-1 The applicant performs the calculations necessary to determine the amount of primary water, and the amount of boric acid solution required to raise RWST volume by 3000 gallons while maintaining a 3100 ppm concentration in the RWST.
- A.1-2 The applicant determines from the data provided, that RCP #2 should be started first, and the earliest time to start the pump is 1742.
- A.2 The applicant reviews a partial performance of 1-SI-0-4, "Monthly Surveillances," identifies five errors and determines the actions required to be taken for each of the errors.
- A.3 The applicant calculates the total dose received performing the assigned tasks to be 23.3 Rem, and then determines that personnel receiving emergency or accident exposures should be restricted from further occupational exposure pending the outcome of exposure evaluations and, if necessary, medical surveillance
- A.4 Not Required.

Fiur

ES-301

Administrative Topics Outline

Form ES-301-1

Facility: **Watts Bar**

Date of Examination: August 2010

Examination Level: RO ☐ SRO ☒

Operating Test Number: NRC Exam 1

Administrative Topic (See Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M, R	A.1-1 Determine Values for Raising RWST Level. 2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation. (41.10 / 43.5 / 45.2 / 45.6) 4.3/4.4.
Conduct of Operations	N, R	A.1-2 Determine RCP Start Requirements. 2.1.32 Ability to explain and apply system limits and precautions. (41.10/43.2/45.12) 2.7/3.5.
Equipment Control	N, R	A.2 Determine a Technical Specification Completion Time Extension. 2.2.42 Ability to track Technical Specification limiting conditions for operations. (41.10 / 43.2 / 45.13) 3.1/4.6
Radiation Control	M, R	A.3 Determine if Stay Times Exceed Emergency Exposure Limits. 2.3.4 Knowledge of radiation exposure limits under normal or emergency conditions. (41.12 / 43.4 / 45.10) 3.2/3.7.
Emergency Procedures / Plan	M, R	A.4 Determine if conditions warrant a Follow-up Report or Upgrade based on changing conditions. 2.4.40 Knowledge of SRO responsibilities in emergency plan implementation. (CFR: 41.10 / 43.5 / 45.11) 2.5/3.3.

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)

SRO Admin JPM Summary

- A.1-1 The applicant will perform the calculations necessary to determine the amount of primary water, and the amount of boric acid solution required to raise RWST volume by 3000 gallons while maintaining a 3100 ppm concentration in the RWST.
- A.1-2 The applicant determines from the data provided, that RCP #2 should be started first, and the earliest time to start the pump is 1742.
- A.2 The applicant evaluates the information presented and determines the LATEST date and time that Unit must be placed in Mode 4 based on the information presented.
- A.3 The applicant calculates the total dose received performing the assigned tasks to be 23.3 Rem, and then determines that personnel receiving emergency or accident exposures should be restricted from further occupational exposure pending the outcome of exposure evaluations and, if necessary, medical surveillance
- A.4 The applicant evaluates changes to plant conditions, determines that an upgrade from a Site Area Emergency to a General Emergency is required, prepares forms for emergency notification, and initiates Protective Action Recommendations.

FINAL

-ES-301

Control Room/In-Plant Systems Outline

Form ES-301-2

Facility: **Watts Bar**

Date of Examination: August 2010

Exam Level: RO ☒ SRO-I ☒ **SRO-U** ☒

Operating Test Number: NRC Exam 1

(Bolded JPMs are SRO-U.)

(Italicized JPM is RO only.)

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. Perform a Minor Dilution. 004 A Chemical and Volume Control System (4.07, 3.9/3.7).	A, M	1
b. Fill Cold Leg Accumulator #4. 006 Emergency Core Cooling System (A4.07, 4.4/4.4).	M, L	2
c. Perform ES-1.3 Transfer to Containment Sump. 011 Large Break LOCA (EA1.11, 4.2/4.2).	EN, M	3
d. <i>Respond to 1A RHR pump trip per AOI-14.</i> 025 <i>Loss of Residual Heat Removal System</i> (AA1.09, 3.2/3.1)	D, L	4P
e. Respond to a PRT High Pressure alarm. 007 Pressurizer Relief Tank/Quench Tank (A4.10, 3.6/3.8)	A, M	5
f. Shutdown of DG from Main Control Room. 064 Emergency Diesel Generators (A4.01, 4.0/4.3).	C or S, A, EN, M	6
g. Return Failed RCS Temperature Channel to Service. 016 Non-Nuclear Instrumentation System (A4.01, 2.9/2.8).	A, N	7
h. Shutdown Instrument Room Purge. 029 Containment Purge System (A2.03, 2.7/3.2).	C or S, N	8

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

i. Bypassing 1-PCV-62-81, CVCS LETDOWN HX PRESS CNTL, for local control. 004 Chemical and Volume Control System (A1.11, 3.0/3.0).	D, R	2
j. Transfer 250v DC Turbine Building Distribution Board 1 from Normal to Alternate. 063 DC Electrical Distribution System (K4.02, 2.9/3.2).	D	6
k. Local Restart of C&SS Air Compressors. 065 Loss of Instrument Air (AK3.08, 3.7/3.8).	A, 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
(EN)gineered safety feature	- / - / ≥ 1
(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	

Control Room/In-Plant System JPM Summary

- B.1.a** Applicant aligns the CVCS system to accomplish a minor dilution using SOI-62.02, "Boron Concentration Control," Section 6.6, "Minor Dilution." When the dilution is initiated, 1-FCV-62-128, MAKEUP TO VCT INLET, and 1-FCV-62-143, PW TO BLENDER, fail open. The operator enters AOI-3, "Malfunction of Reactor Makeup Control," and terminates the dilution by stopping the primary water pumps.
- B.1.b** Applicant adds water to the cold leg accumulator with reactor coolant system pressure at approximately 1520 psig. The lower RCS pressure requires a different alignment to be established during the filling process.
- B.1.c** Applicant aligns the ECCS systems to the Containment Sump. The applicant identifies the failure of 1-FCV-63-3, "SI PMPS RECIRC HDR TO RWST" to close and the failure of 1-FCV-63-11, "RHR PMP B TO SI PMPS SUCT" to open, and takes required compensatory actions.
- B.1.d** *THIS JPM IS DESIGNATED AS THE "RO ONLY" JPM.*
The applicant responds to the trip of 1A-A RHR pump in accordance with AOI-14, "Loss of RHR Shutdown Cooling," Section 3.5, "RHR Pump 1A-A Trip" and places the 1B-B RHR pump in service.
- B.1.e** The applicant uses ARI 88-C actions to reduce PRT pressure to 6.5 psig and then diagnoses the failure of PZR PORV 1-68-334 open, and terminates the depressurization by placing 1-HS-68-332A BLOCK VALVE FOR PORV 334 in the CLOSED position.
- B.1.f** This JPM may be performed either in the Main Control Room or on the Simulator.
During a normal shutdown of the 1B-B Diesel Generator from the Control Room, the applicant determines that an emergency stop of the diesel generator is required upon receipt of annunciator 203-D, "CRANKCASE PRESS HI" and performs an emergency stop of the 1B-B Diesel Generator.
- B.1.g** The applicant returns Loop 2 RCS Tavg and ΔT inputs to the rod control system, using AOI-2, "Malfunction of Reactor Control System." When rods are returned to automatic, a continuous rod bank withdrawal occurs. The applicant initiates a manual reactor trip upon diagnosis of the continuous rod bank withdrawal.
- B.1.h** This JPM may be performed either in the Main Control Room or on the Simulator.
The applicant shuts down the instrument room purge using SOI-30.02, "Containment Purge System," Section 7.6, "SHUTDOWN of Instrument Room Purge."
- B.1.i** **The applicant performs the manual actions required to bypass PCV-62-81, LETDOWN PRESS CONTROL in accordance with SOI-62.01 Section 8.15.**
- B.1.j** The applicant completes the transfer of 250V DC Turbine Building Distribution Board #1 from its Normal to Alternate supply per SOI-239.01, "250V Battery Board 1," Section 8.7.1, "Transfer from Normal to Alternate."
- B.1.k** **After a station blackout, the applicant aligns and restarts the "A" and "B" Air Compressors using AOI-10, "Loss of Control Air." Recovery of the "A" Control and Station Air Compressor requires the reset of the high air temperature alarm, and hand loading of the compressor after restart.**

Facility: : Watts Bar		Date of Examination: 08/2010		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).	JM	SR	SR	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JM	SR	SR	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	JM	SR	SR	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	JM	SR	SR	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JM	SR	SR	
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 	JM	SR	SR	
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.	JM	SR	SR	
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.		JM	SR	SR	
Printed Name / Signature		Date			
a.	Author John B. Roden / <i>John B. Roden</i>	8/12/10			
b.	Facility Reviewer(*) Steven R. Smith / <i>Steven R. Smith</i>	8/12/10			
c.	NRC Chief Examiner (#) GERARD W. LASCA / <i>Gerard W. Lasca</i>	8/12/2010			
d.	NRC Supervisor MALCOLM T. WIDMANN / <i>Malcolm T. Widmann</i>	08/16/10			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

Facility: Watts Bar Date of Exam: 08/10 Scenario Numbers: 1 / 2 / 3 / 4 / 5 / SPARE 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.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
2.	The scenarios consist mostly of related events.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
3.	Each event description consists of <ul style="list-style-type: none"> the point in the scenario when it is to be initiated the malfunction(s) that are entered to initiate the event the symptoms/cues that will be visible to the crew the expected operator actions (by shift position) the event termination point (if applicable) 	<i>ML</i>	<i>SRS</i>	<i>JS</i>
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.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
5.	The events are valid with regard to physics and thermodynamics.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
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.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
8.	The simulator modeling is not altered.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
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.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
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.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	<i>ML</i>	<i>SRS</i>	<i>JS</i>
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).	<i>ML</i>	<i>SRS</i>	<i>JS</i>
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<i>ML</i>	<i>SRS</i>	<i>JS</i>
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		
1.	Total malfunctions (5-8)	8 / 8 / 8 / 7 / 6 / 7	<i>ML</i>	<i>SRS</i>
2.	Malfunctions after EOP entry (1-2)	2 / 2 / 1 / 1 / 2 / 1 / 2	<i>ML</i>	<i>SRS</i>
3.	Abnormal events (2-4)	4 / 4 / 4 / 4 / 4 / 4	<i>ML</i>	<i>SRS</i>
4.	Major transients (1-2)	2 / 2 / 2 / 1 / 1 / 1	<i>ML</i>	<i>SRS</i>
5.	EOPs entered/requiring substantive actions (1-2)	1 / 2 / 1 / 1 / 1 / 2	<i>ML</i>	<i>SRS</i>
6.	EOP contingencies requiring substantive actions (0-2)	0 / 1 / 1 / 0 / 1 / 1	<i>ML</i>	<i>SRS</i>
7.	Critical tasks (2-3)	2 / 4 / 2 / 4 / 3 / 2	<i>ML</i>	<i>SRS</i>

Facility: Watts Bar			Date of Exam: August 2010			Operating Test No.: Crew 1														
A P P L I C A N T	E V E N T T Y P E	Scenarios															T O T A L	M I N I M U M(*)		
		Scenario 1			Scenario 2															
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION									
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P							
		R	I	U																
RO	RX															0	1	1	0	
SRO-I-1	NOR	1			1											2	1	1	1	
SRO-U	I/C	2,3,4,5			2,3,4,5											8	4	4	2	
	MAJ	6			6											2	2	2	1	
	TS	2,3			2,3,4											5	0	2	2	
RO-1	RX		1													1	1	1	0	
SRO-I	NOR						1									1	1	1	1	
	I/C		2,5				2,3									4	4	4	2	
SRO-U	MAJ		6				6									2	2	2	1	
	TS															0	0	2	2	
RO-2	RX					1										1	1	1	0	
SRO-I	NOR			1												1	1	1	1	
	I/C			3,4		4,5										4	4	4	2	
SRO-U	MAJ			6		6										2	2	2	1	
	TS															0	0	2	2	
RO	RX																1	1	0	
SRO-I	NOR																1	1	1	
	I/C																4	4	2	
SRO-U	MAJ																2	2	1	
	TS																0	2	2	

Instructions:

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

Facility: Watts Bar			Date of Exam: August 2010			Operating Test No.: Crew 2												
A P P L I C A N T	E V E N T T Y P E	Scenarios													T O T A L	M I N I M U M (*)		
		Scenario 1			Scenario 3			Scenario 4										
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION							
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P					
															R	I	U	
RO	RX					1									1	1	1	0
SRO-I-1	NOR	1							1						2	1	1	1
	I/C	2,3,4,5				3,4			2,3,4,5						10	4	4	2
SRO-U	MAJ	6				7			6						3	2	2	1
	TS	2,3							2,3						4	0	2	2
RO	RX								1						1	1	1	0
SRO-I-2	NOR				1										1	1	1	1
	I/C			4	2,3,4,5,6				2,3						8	4	4	2
SRO-U	MAJ				7				6						2	2	2	1
	TS				2,4										2	0	2	2
RO-3	RX		1												1	1	1	0
SRO-I	NOR						1			1					2	1	1	1
	I/C		2,5				5,6			4,5					6	4	4	2
SRO-U	MAJ		6				7			6					3	2	2	1
	TS														0	0	2	2
RO	RX															1	1	0
SRO-I	NOR															1	1	1
	I/C															4	4	2
SRO-U	MAJ															2	2	1
	TS															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: Watts Bar			Date of Exam: August 2010			Operating Test No.: Crew 3												
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M(*)			
		Scenario 1			Scenario 3			Scenario 4										
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION							
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P					
															R	I	U	
RO	RX					1									1	1	1	0
SRO-I-3	NOR	1							1						2	1	1	1
	I/C	2,3,4,5				3,4			2,3,4,5						10	4	4	2
SRO-U	MAJ	6				7			6						3	2	2	1
	TS	2,3							2,3						4	0	2	2
RO	RX								1						1	1	1	0
SRO-I-4	NOR				1										1	1	1	1
	I/C			4	2,3,4,5,6				2,3						8	4	4	2
SRO-U	MAJ				7				6						2	2	2	1
	TS				2,4										2	0	2	2
RO-4	RX		1												1	1	1	0
SRO-I	NOR						1			1					2	1	1	1
	I/C		2,5				5,6			4,5					6	4	4	2
SRO-U	MAJ		6				7			6					3	2	2	1
	TS														0	0	2	2
RO	RX															1	1	0
SRO-I	NOR															1	1	1
	I/C															4	4	2
SRO-U	MAJ															2	2	1
	TS															0	2	2

Instructions:

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

Facility: Watts Bar		Date of Exam: August 2010		Operating Test No.: Crew 4																						
A P P L I C A N T	E V E N T T Y P E	Scenario 2												Scenario 3			Scenario 5						T O T A L	M I N I M U M (*)		
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION															
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P													
		R	I	U																						
RO	RX								1									1	1	1	0					
SRO-I-5	NOR	1																1	1	1	1					
	I/C	2,3,4,5						6		2,3								7	4	4	2					
SRO-U	MAJ	6							6									2	2	2	1					
	TS	2,3,4																3	0	2	2					
RO	RX		1															1	1	1	0					
SRO-I-6	NOR				1													1	1	1	1					
	I/C		4,5		2,3,4,5,6						4							8	4	4	2					
SRO-U	MAJ		6		7													2	2	2	1					
	TS				2,4													2	0	2	2					
RO	RX					1												1	1	1	0					
SRO-I-7	NOR								1									1	1	1	1					
	I/C			3		3,4		2,3,4,5										7	4	4	2					
SRO-U	MAJ					7		6										2	2	2	1					
	TS							2,4,5										3	0	2	2					
RO	RX																		1	1	0					
SRO-I	NOR																		1	1	1					
	I/C																		4	4	2					
SRO-U	MAJ																		2	2	1					
	TS																		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: Watts Bar			Date of Exam: August 2010			Operating Test No.: Crew 5												
A P P L I C A N T	E V E N T T Y P E	Scenarios - for Spare													T O T A L	M I N I M U M(*)		
		Scenario 2			Scenario 4			Scenario 5										
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION							
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P					
															R	I	U	
RO	RX								1						1	1	1	0
SRO-I-8	NOR	1													1	1	1	1
	I/C	2,3,4,5						5		2,3					7	4	4	2
SRO-U	MAJ	6							6						2	2	2	1
	TS	2,3,4													3	0	2	2
RO	RX		1												1	1	1	0
SRO-I-9	NOR				1										1	1	1	1
	I/C		4,5		2,3,4,5					4					7	4	4	2
SRO-U	MAJ		6		6										2	2	2	1
	TS				2,3										2	0	2	2
RO	RX					1									1	1	1	0
SRO-I-10	NOR							1							1	1	1	1
	I/C			3		2,3		2,3,4,5							7	4	4	2
SRO-U	MAJ					6		6							2	2	2	1
	TS							2,4,5							3	0	2	2
RO	RX															1	1	0
SRO-I	NOR															1	1	1
	I/C															4	4	2
SRO-U	MAJ															2	2	1
	TS															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: Watts Bar		Date of Exam: August 2010		Operating Test No.: SPARE														
A P P L I C A N T	E V E N T T Y P E	Scenarios													T O T A L	M I N I M U M(*)		
		SPARE																
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION							
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P					
		R	I	U														
RO	RX														0	1	1	0
SRO-I	NOR	1													1	1	1	1
	I/C	2,3,4,5													4	4	4	2
SRO-U	MAJ	6													1	2	2	1
	TS	3,5													2	0	2	2
RO	RX		1												1	1	1	0
SRO-I	NOR														0	1	1	1
	I/C		4,5												2	4	4	2
SRO-U	MAJ		6												1	2	2	1
	TS														0	0	2	2
RO	RX														0	1	1	0
SRO-I	NOR			1											1	1	1	1
	I/C			2,3											2	4	4	2
SRO-U	MAJ			6											1	2	2	1
	TS														0	0	2	2
RO	RX															1	1	0
SRO-I	NOR															1	1	1
	I/C															4	4	2
SRO-U	MAJ															2	2	1
	TS															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: Watts Bar		Date of Examination: August 2010		Operating Test No.: 1												
Competencies	APPLICANTS															
	RO X SRO-I SRO-U				RO X SRO-I SRO-U				RO SRO-I SRO-U X				RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4				
Interpret/Diagnose Events and Conditions	2,3,4, 5,6	2,3,4, 5	2,3,4, 5,6	2,3,4, 5,6	2,3,4, 5,6	2,3,4, 5	2,3, 4,5, 6	2,3,4, 5,6	2,3, 4,5, 6	2,3,4, 5	2,3, 4,5, 6	2,3, 4,5, 6				
Comply With and Use Procedures (1)	2,3,4, 5,6	2,3,4, 5	2,3,4, 5,6	2,3,4, 5,6	All	All	All	2,3,4, 5,6	All	All	All	2,3, 4,5, 6				
Operate Control Boards (2)	1,2, 3,4, 5,6	1,2,3, 4,5	1,2,3, 4,5,6	1,2,3, 4,5,6	1,2, 3,4, 5,6	1,2,3, 4,5	1,2, 3,4, 5,6	1,2,3, 4,5,6								
Communicate and Interact	All	All	All	All	All	All	All	All	All	All	All	All				
Demonstrate Supervisory Ability (3)					All	All	All	All	All	All	All	All				
Comply With and Use Tech. Specs. (3)					2, 3	2,3,4	2, 4	2, 3	2, 3	2,3,4	2, 4	2, 3				
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																

Instructions:

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

Facility: Watts Bar		Date of Examination: August 2010		Operating Test No.: 1												
Competencies	APPLICANTS															
	RO X SRO-I SRO-U				RO X SRO-I SRO-U				RO SRO-I SRO-U X				RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	5	6			5	6			5	6						
Interpret/Diagnose Events and Conditions	2,3,4, 5	2,3,4, 5,6			2,3,4, 5	2,3,4, 5,6			2,3,4, 5	2,3,4, 5,6						
Comply With and Use Procedures (1)	2,3,4, 5	2,3,4, 5,6			2,3,4, 5	2,3,4, 5,6			2,3,4, 5	2,3,4, 5,6						
Operate Control Boards (2)	1,2,3, 4,5	1,2,3, 4,5,6			1,2,3, 4,5	1,2,3, 4,5,6										
Communicate and Interact	All	All			All	All			All	All						
Demonstrate Supervisory Ability (3)					All	All			All	All						
Comply With and Use Tech. Specs. (3)					2,4,5	3, 5			2,4,5	3, 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

ES-401

Record of Rejected K/As

Form ES-401-4

[illegible]

ES-401

Written Examination Quality Checklist

Form ES-401-6

Facility: Watts Bar		Date of Exam: 08/2010		Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>			
Item Description				Initial			
				a	b	c	
1. Questions and answers are technically accurate and applicable to the facility.				ABZ	CEC	JS	
2. a. NRC N/As are referenced for all questions. b. Facility learning objectives are referenced as available.				ABZ	CEC	JS	
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401				ABZ	CEC	JS	
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 NRC OL program office).				/	/	JS	
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 <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or ___ other (explain)				ABZ	CEC	JS	
6. Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.		Bank	Modified	New	ABZ	CEC	JS
		21 / 12	47 / 20	32 / 68			
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 N/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.		Memory		C/A	ABZ	CEC	JS
		43 / 40		57 / 60			
8. References/handouts provided do not give away answers or aid in the elimination of distractors.				ABZ	CEC	JS	
9. Question content conforms with specific N/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.				ABZ	CEC	JS	
10. Question psychometric quality and format meet the guidelines in ES Appendix B.				ABZ	CEC	JS	
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.				ABZ	CEC	JS	
a. Author		Printed Name / Signature			Date		
b. Facility Reviewer (*)		John B. Roden / <i>[Signature]</i>			9/16/10		
c. NRC Chief Examiner (#)		Ronald E. Crews / <i>[Signature]</i>			9/16/10		
d. NRC Regional Supervisor		GERARD W. LASTER / <i>[Signature]</i>			9/16/2010		
		MALCOLM T. WIDMAN / <i>[Signature]</i>			09/16/10		
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.							

This Form is for the Revised SRO portion of the Watts Bar
2010-301 Written Exam.

Facility: Watts Bar		Date of Exam: 08/2010		Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>																																					
Item Description				Initial																																					
				a	b*	c#																																			
1.	Questions and answers are technically accurate and applicable to the facility.			JBL	SRS	JBL																																			
2.	a.	NRC K/As are referenced for all questions.		JBL	SRS	JBL																																			
	b.	Facility learning objectives are referenced as available.		JBL	SRS	JBL																																			
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401			JBL	SRS	JBL																																			
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).					JBL																																			
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 <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or ___ other (explain)			JBL	SRS	JBL																																			
6.	Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank	Modified	New	JBL	SRS																																			
		21 / 12	47 / 20	32 / 68																																					
7.	Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/ analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory	C/A		JBL	SRS																																			
		43 / 40	57 / 60																																						
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.			JBL	SRS	JBL																																			
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.			JBL	SRS	JBL																																			
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.			JBL	SRS	JBL																																			
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.			JBL	SRS	JBL																																			
<table border="0"> <tr> <td colspan="4">Printed Name / Signature</td> <td colspan="3">Date</td> </tr> <tr> <td>a. Author</td> <td colspan="3">John B. Roden / <i>John B. Roden</i></td> <td colspan="3">8/16/10</td> </tr> <tr> <td>b. Facility Reviewer (*)</td> <td colspan="3">Steven R. Smith / <i>Steven R. Smith</i></td> <td colspan="3">8/16/10</td> </tr> <tr> <td>c. NRC Chief Examiner (#)</td> <td colspan="3">GERARD W. LASA / <i>Gerard W. Lasa</i></td> <td colspan="3">8/19/2010</td> </tr> <tr> <td>d. NRC Regional Supervisor</td> <td colspan="3">MALCOLM T. WIDAMAN / <i>Malcolm T. Widaman</i></td> <td colspan="3">08/19/10</td> </tr> </table>							Printed Name / Signature				Date			a. Author	John B. Roden / <i>John B. Roden</i>			8/16/10			b. Facility Reviewer (*)	Steven R. Smith / <i>Steven R. Smith</i>			8/16/10			c. NRC Chief Examiner (#)	GERARD W. LASA / <i>Gerard W. Lasa</i>			8/19/2010			d. NRC Regional Supervisor	MALCOLM T. WIDAMAN / <i>Malcolm T. Widaman</i>			08/19/10		
Printed Name / Signature				Date																																					
a. Author	John B. Roden / <i>John B. Roden</i>			8/16/10																																					
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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.																																									

* Changes were made to the originally approved Exam based on additional reviewer
 Exam was approved for administration. Gerard W. Lasa / *Gerard W. Lasa* 8/18 9/1/2010
 7 of the 9 requested questions were changed. MALCOLM T. WIDAMAN / *Malcolm T. Widaman* 09/01/10.

Written Examination Grading
Quality Checklist

Facility: Watts Bar 2010-301		Date of Exam: 09/22/2010		Exam Level: RO/SRO	
Item Description		Initials			
		a	b	c	
1.	Clean answer sheets copied before grading		N/A	GL	
2.	Answer key changes and question deletions justified and documented			GL	
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)			GL	
4.	Grading for all borderline cases (80 \pm 2% overall and 70 or 80, as applicable, \pm 4% on the SRO-only) reviewed in detail			GL	
5.	All other failing examinations checked to ensure that grades are justified			GL	
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants			GL	
Printed Name/Signature		Date			
a. Grader	GERARD W. LISA	10/12/2010			
b. Facility Reviewer(*)	N/A				
c. NRC Chief Examiner (*)	EDWIN LEA, Jr.	10/12/2010			
d. NRC Supervisor (*)	MARCOLL T. WIDEMAN	10/19/10			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

**Written Examination Grading
Quality Checklist**

Facility: Watts Barr		Date of Exam: 9/22/2010 Exam Level: RO/SRO		
Item Description	Initials			
	a	b	c	
1. Clean answer sheets copied before grading	EL			
2. Answer key changes and question deletions justified and documented	N/A			
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	EL			
4. Grading for all borderline cases ($80 \pm 2\%$ overall and 70 or 80, as applicable, $\pm 4\%$ on the SRO-only) reviewed in detail	EL			
5. All other failing examinations checked to ensure that grades are justified	EL			
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants				
Printed Name/Signature		Date		
a. Grader	<u>Edwin L. C. A., Jr. / Edwin L. C. A., Jr.</u>		<u>10/8/2010</u>	
b. Facility Reviewer(*)	_____		_____	
c. NRC Chief Examiner (*)	_____		_____	
d. NRC Supervisor (*)	_____		_____	
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.				