Facility: Turkey Point 2009-301 Date of Examination: 2/23/2008

Examinations Developed by: **Facility**

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)	08/2008
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	09/03/2008
-120	3. Facility contact briefed on security and other requirements (C.2.c)	09/03/2008
-120	4. Corporate notification letter sent (C.2.d)	09/05/2008
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	1/5/2009
{-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)	12/08/2008
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	12/13/2008
{-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)	1/5/2009
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.l; C.2.g; ES-202)	1/23/2009
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.l; C.2.i; ES-202)	2/09/2009
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	2/09/2009
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	2/09/2009
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h) 2/18/2009 3/16/2009	2/17/2007
-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)	2/17/2007
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	2/17/2007
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	2/17/2007

* 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

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

Facility: Turkey Point Units 3 & 4 Date of Examination: 2/23/09

Item	Task Description	Initials a	Initials b*	Initials c#
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	✓	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.	✓	↓	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	✓		
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	✓		
2. SIMULATOR	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	✓	✓	
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity, and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s), and that scenarios will not be repeated on subsequent days.	✓	✓	
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	✓	✓	
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.	✓	✓	
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form (2) at least one task is new or significantly modified (3) no more than one task is repeated from the last two NRC licensing examinations	✓	✓	
	c. Determine 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.	✓	✓	
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	✓	✓	
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	✓	✓	
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	✓	✓	
	d. Check for duplication and overlap among exam sections.	✓	✓	
	e. Check the entire exam for balance of coverage.	✓	✓	
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	✓	✓	

	Printed Name/Signature	Date
a. Author	Owen B Trio	12/3/08
b. Facility Reviewer (*)	James R. Corder	12/2/08
c. NRC Chief Examiner (#)	GERARD W. USKA	02/17/09
d. NRC Supervisor	LINCOLN T. WILLIAMS	02/18/09

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

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

DRAFT (written)

Facility: Turkey Point Date of Examination: February 2009

Item	Task Description	Initials a	Initials b*	Initials c#
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	crk		rfa
	b. Assess whether the outline was systematically and randomly prepared in accordance with	crk		rfa
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	crk		rfa
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	crk		rfa
2. SIMULATOR	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.			
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and cated from the applicants' audit test(s), and that scenarios will not be repeated on subsequent days.			
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and			
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.			
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: the tasks are distributed among the topics as specified on the form at least one task is new or significantly modified no more than one task is repeated from the last two NRC licensing examinations			
	c. Determine if there are enough different outlines to test the projected number and mix of			
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	crk		rfa
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	crk		rfa
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	crk		rfa
	d. Check for duplication and overlap among exam sections.	*		*
	e. Check the entire exam for balance of coverage.	*		*
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	crk		rfa

	Printed Name/Signature	Date
a. Author:	Craig R. Kontz	8/18/08
b. Facility Reviewer (*)		
c. NRC Chief Examiner (#)	Gerard W. Laska / Ronald F. Aiello for	8/18/08
d. NRC Supervisor	Malcolm T. Widmann	08/19/08

Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.
* Operating test not developed yet

DRAFT

ILC-24

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 2/23/09 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 2/23/09. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	JOHN EATON	SM / SRO		2/23		3-24-9
2.	Donald Briggs	Instructor / Sim Booth		2/26/09		3/19/09
3.	RICK STEBBINS	INSTRUCTOR / SIM BOOTH		2/26/09		
4.	C.A. FERNANDEZ	INSTRUCTOR		2/26/09		3/19/09
5.	David Funk	US / SRO		3/2/09		3/19/09
6.	Ed Nielsen	US/SRO		3/2/09		3/24/09
7.	D BROWNING	RCO		3-2-09		3-19-09
8.	Kelly Hall	RCO		3-2-09		3/20/09
9.	Ken White	INSTRUCTOR		3/17/09		3/19/9
10.	GA Laughlin	Proctor		3/18/09		3/18/09
11.						
12.						
13.	N A	N A	N A		N A	
14.						
15.						

NOTES:

ILC - 24

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 2/23/09 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 2/23/09. 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.	James Conder	ILC Supervisor	[signature]	8/19/08			
2.	William Miller	Exam Developer	[signature]	8/25/08			
3.	Owen B Triolo	Exam Developer	[signature]	9/15/08	[signature]	3/19/09	
4.	Roger L Reed	Exam Evaluator	[signature]	10/13/08	[signature]	3/24/09	
5.	C Doty	Exam Evaluator	[signature]	10/17/08	[signature]	3/24/09	
6.	M. Murphy	Exam Evaluator	[signature]	10/13/08	[signature]	3.19.09	
7.	Tim Jones	Exam Evaluator	[signature]	10-13-08	[signature]	3/19/09	[illegible]
8.	Tom Wendell	Sim Engr	[signature]	11-6-08	[signature]	3/23/09	
9.	Robert Heidecker	Exam Developer	[signature]	11/26/08	[signature]	3/19/09	
10.	George Mousiadis	Simulator Hardware Engr.	[signature]	12/8/08			
11.	[illegible]	RCO	[signature]	12/16/08	[signature]	3/24/09	
12.	[illegible]	Shift Manager	[signature]	12/16/08	[signature]	3/20/09	
13.	Chuck Sizemore	Mgr Fleet Ops	[signature]	1/14/09	[signature] for CS	3/24/09*	
14.	Robert Shane	Sim Instructor	[signature]	1/8/09	[signature]	3/19/09	
15.	Thomas White	Sim instructor	[signature]	1-8-09	[signature]	3-20-09	

NOTES: * Per email with C Sizemore @ 3/24/09

1. Pre-Examination

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2. Post-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	Leslie Pineiro	OPS Instructor		2-2-09		3/20/09	
2.	FRANK LEON	SIM. ENGR.		2-2-09		3/19/09	
3.	John Shepard	BOP		2/3/09		3/19/09	
4.	JEFF MOELLER	VALIDATOR		2/3/09		3-24-09	
5.	JAMES SPEICHER	SRO VALIDATOR		2/5/09		3/13/09	
6.	M. A. NEWTON	SRO Validator		2/5/09			
7.	GUY LOY	SUPERVISOR		2/9/09		3/20/09	
8.	GENE ADDAR	RP INSTRUCTOR		2/9/09			
9.	JUAN GARCIA	Validation		2/10/9		3/19/9	
10.	MATTHEW DUFFETTE	VALIDATOR		2/10/09		3/24/09	
11.	MICHAEL COEN	VALIDATION		2/19/09			
12.	DAVID C DELL	VALIDATION		2/19/09			
13.	DICK DRUCKER	VALIDATION		2/19/09		3/24/09	
14.	Paul Reimers	Validation		2/19/9		3/24/9	
15.	Scott Meier	BOOTH INSTRUCTOR		2/23/09		3/9/09	

NOTES:

ILC-24

Examination Security Agreement

1. **Pre-Examination**

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 2/23/09 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 2/23/09. 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.	James Conder	ILC Supervisor	[signature]	8/19/08	[signature]	3/25/09	
2.	William Miller	Exam Developer	[signature]	8/25/08	[signature]	3/30/09	**
3.	Owen B Triolo	Exam Developer	[signature]	9/15/08	[signature]	3/19/09	
4.	Roger L Reed	Exam Evaluator	[signature]	10/13/08	[signature]	3/24/09	
5.	C Doty	Exam Evaluator	[signature]	10/13/08	[signature]	3/24/09	
6.	M. Murphy	Exam Evaluator	[signature]	10/13/08	[signature]	3.19.09	
7.	Tim Jones	Exam Evaluator	[signature]	10-13-08	[signature]	3/19/09	[illegible]
8.	Tom Wendeln	Sim Engr	[signature]	11-6-08	[signature]	3/23/09	
9.	Robert Heidecker	Exam Developer	[signature]	11/26/08	[signature]	3/19/09	
10.	George Mousseau	Simulator Hardware [illegible]	[signature]	12/8/08	[signature]	3-27-09	
11.	[illegible]	RCO	[signature]	12/16/08	[signature]	3/24/09	
12.	[illegible]	Shift Manager	[signature]	12/16/08	[signature]	3/20/09	
13.	Patrick Sizemore	Mgr Plant Ops	[signature]	1/14/09	[signature] For CS	3/24/09	*
14.	Robert Swank	Sim Instructor	[signature]	1/8/09	[signature]	3/19/09	
15.	Thomas White	Sim instructor	[signature]	1-8-09	[signature]	3-20-09	

NOTES: * Per email with C Sizemore @ 3/24/09

** Per telecon with W Miller @ 3/30/09

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 2-23-09 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.	Leslie Pineiro	OPS Instructor		2-2-09		3/20/09	
2.	FRANK LEON	SIM. ENGR.		2-2-09		3/19/09	
3.	John Shepard	BOP		2/3/09		3/19/09	
4.	JEFF MOELLER	VALIDATOR		2/3/09		3-24-09	
5.	JAMES SPEICHER	SRO VALIDATOR		2/5/09		3/30/09	
6.	M. A. NEWTON	SRO Validator		2/5/09		3 30 09	
7.	Guy Lam	SUPERVISOR		2/9/09		3/20/09	
8.	GENE BOGAR	RP INSTRUCTOR		2/9/09		4/8/09	**
9.	Juan Garcia	RO validation		2/10/9		3/19/9	
10.	MATTHEW DUKETTE	VALIDATOR		2/6/09		3/24/09	
11.	MICHAEL COEN	VALIDATION		2/19/09		4/10/09	
12.	DAVID C DELL	VALIDATION		2/19/09		4/2/09	*
13.	DICK DANIELS	VALIDATION		2/19/09		3/24/09	
14.	Paul Reimers	Validation		2/19/09		3/24/09	
15.	Scott Meier	BOOTH INSTRUCTOR		2/23/09		3/19/09	

NOTES:

* per email D Dell 6 4/2/09

* * per email G Adams 6 4/8/09

ILC-24

1. Pre-Examination

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1.	JOHN EATON	SM / SRO		2/23		3-24-9
2.	Donald Briggs	Instructor / Sim Booth		2/26/09		3/19/09
3.	RICK STEBBINS	INSTRUCTOR / SIM BOOTH		2/26/09		3/29/09
4.	C.A. FERNANDEZ	INSTRUCTOR		2/26/09		3/19/09
5.	David Funk	US / SRO		3/2/09		3/19/09
6.	Ed Nielsen	US/SRO		3/2/09		3/24/09
7.	D BROWNING	Reo		3-2-09		3.19.09
8.	Fell	RCO		3-2-09		3/20/09
9.	Ken White	INSTRUCTOR		3/17/09		3/19/9
10.	GA Laughlin	Proctor		3/18/09		3/18/09
11.						
12.						
13.	N A	N A	N A		N A	
14.						
15.						

NOTES:

ILC - 24

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 2/23/09 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 ________. 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.	James Conder	ILC Supervisor	[signature]	8/19/08			
2.	William Miller	Exam Developer	[signature]	8/25/08			
3.	OWEN B TRIOLO	Exam Developer	[signature]	9/15/08			
4.	ROGER L REED	EXAM EVALUATOR	[signature]	10/13/08			
5.	C Doty	Exam Evaluator	[signature]	10/17/08			
6.	M. MURPHY	EXAM EVALUATOR	[signature]	10/13/08			
7.	Tim Jones	Exam Evaluator	[signature]	10-13-08			
8.	TOM WENDELL	SIM ENGR	[signature]	11-6-08			
9.	Robert Heidecker	EXAM Developer	[signature]	11/26/08			
10.	GEORGE MOYSCIAN	SIMULATOR HARDWARE ENGR	[signature]	12/8/08			
11.	[illegible]	RCO	[signature]	12/16/08			
12.	~~[illegible]~~ Jowerborow	Shift Manager	[signature]	12/16/08			
13.	CHUCK SIZEMORE	~~[illegible]~~ Exec OPS	[signature]	1/14/09			
14.	~~[illegible]~~ ROBERT SNARE	~~[illegible]~~ Sim Instructor	[signature]	1/8/09			
15.	Thomas White	Sim instructor	[signature]	1-8-09			

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 2-23-09 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 _____. 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.	Leslie Pineiro	OPS Instructor		2-2-09			
2.	FRANK LEON	SIM. ENGR.		2-2-09			
3.	John Shepard	BOP		2/3/09			
4.	JEFF MOELLER	VALIDATOR		2/3/09			
5.	JAMES SPEICHER	SRO VALIDATOR		2/5/09			
6.	M. A. NEWTON	SRO Validator		2/5/09			
7.	Guy Log	SUPERVISOR		2/9/09			
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							

NOTES:

FINAL

ES-301 Administrative Topics Outline Form ES-301-1

Facility: Turkey Point Units 3 & 4 Date of Examination: : 2/23/09

Exam Level: SRO (U) & (I) Operating Test Number: 2009-301

Administrative Topic (See Note)	Type Code (See Note)	Describe Activity to be performed
A.1.a Conduct of Operations	CR, N	Perform a Review of a Manual RCS Leakrate Calculation (2.1.7 SRO 4.7)
A.1.b Conduct of Operations	CR, N	Review 3-OP-062, Safety Injection Attachments (2.1.29 SRO 4.0)
A.2 Equipment Control	CR, N	Review Accident Monitoring Instrumentation Channel Checks (2.2.22 SRO 4.7)
A.3 Radiation Control	CR, M	Determine Dose Rates and Radiological Requirements From a Survey Map (2.3.7 RO 3.5 SRO 3.6)
A.4 - SRO Emergency Plan	CR, N	Classify Event and complete SNF (2.4.41 SRO 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 5 are required.

* Types and Codes (C) Control Room (S) Simulator (CR) Classroom
(D)irect from bank (≤3 for ROs, ≤4 for SROs)
(N)ew or (M)odified from bank (≥1)
(P)revious 2 Exams (≤1 Randomly selected)

FINAL

ES-301 Administrative Topics Outline Form ES-301-1

Facility: Turkey Point Units 3 & 4		Date of Examination: 2/23/09
Exam Level: RO		Operating Test Number: 2009-301
Administrative Topic (See Note)	Type Code (See Note)	Describe Activity to be performed
A.1 Conduct of Operations	CR, N	Perform a Manual RCS Leakrate Calculation (2.1.7 RO 4.4)
N/A	N/A	N/A
A.2 Equipment Control	CR, N	Perform Accident Monitoring Instrumentation Channel Checks (2.2.12 RO 3.7)
A.3 Radiation Control	CR, M	Determine Dose Rates and Radiological Requirements From a Survey Map (2.3.7 RO 3.5 SRO 3.6)
A.4 - RO Emergency Plan	CR, N	Complete a Florida State Notification Form (2.4.39 RO 3.9)
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.		
* Types and Codes (C) Control Room (S) Simulator (CR) Classroom (D)irect from bank (≤3 for ROs, ≤4 for SROs) (N)ew or (M)odified from bank (≥1) (P)revious 2 Exams (≤1 Randomly selected)		

FINAL

ES-301 **Control Room/In-Plant Systems Outline** **Form ES-301-2**

Facility: Turkey Point Date of Examination: 2/23/09
Exam Level (circle one): RO Operating Test No.: 2009-301

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

	System / JPM Title	Type Code*	Safety Function
a	Align RHR For Cold Leg Recirculation	A, M, S	2
b	Restore Accumulator Pressure	D, C	3
c	Place RHR In Service	L, N, S	4 (PRI)
d	Manually Initiate Containment Spray	A, N, S	5
e	Manually Synchronize Main Generator	D, L, S	4 (SEC)
f	Respond to a LT 112 failure	A, N, S	7
g	Respond to a CCW system leak	A, N, L, S	8
h	Terminate a Waste Gas Release	A, N, S	9

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

i	Respond to ATWS Locally	A, E, D	1
j	Realign Opposite Units HHSI Pumps	E, D, R	2
k	Locally Start a Diesel Generator	A, E, M	6

@ All control room (and in-plant) systems must be different and 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
(L)ow-Power	≥ 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	

FINAL

ES-301 **Control Room/In-Plant Systems Outline** **Form ES-301-2**

Facility: Turkey Point Date of Examination: : 2/23/09
Exam Level (circle one): SRO-I Operating Test No.: 2009-301

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

	System / JPM Title	Type Code*	Safety Function
a	Align RHR For Cold Leg Recirculation	A, M, S	2
b	Restore Accumulator Pressure	D, C	3
c	Place RHR In Service	L, N, S	4 (PRI)
d	Manually Initiate Containment Spray	A, N, S	5
e	N/A	N/A	N/A
f	Respond to a LT 112 failure	A, N, S	7
g	Respond to a CCW system leak	A, N, L, S	8
h	Terminate a Waste Gas Release	A, N, S	9

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

i	Respond to ATWS Locally	A, E, D	1
j	Realign Opposite Units HHSI Pumps	E, D, R	2
k	Locally Start a Diesel Generator	A, E, M	6

@ All control room (and in-plant) systems must be different and 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
(L)ow-Power	≥ 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	

FINAL

ES-301 **Control Room/In-Plant Systems Outline** **Form ES-301-2**

Facility: Turkey Point — Date of Examination: 2/23/09
Exam Level (circle one): SRO-U — Operating Test No.: 2009-301

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

System / JPM Title	Type Code*	Safety Function
a N/A	N/A	N/A
b Vent Accumulators	D, C	3
c N/A	N/A	N/A
d Manually Initiate Containment Spray	A, N, S	5
e N/A	N/A	N/A
f N/A	N/A	N/A
g Respond to a CCW system leak	A, N, L, S	8
h N/A	N/A	N/A
In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i Respond to ATWS Locally	A, E, D	1
j Realign Opposite Units HHSI Pumps	E, D, R	2
k N/A	N/A	N/A

@ All control room (and in-plant) systems must be different and 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
(L)ow-Power	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

Facility: Turkey Point Units 3 & 4 Date of Examination: 2/23/09 Operating Test Number: 2009-301

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).			
b. There is no day-to-day repetition between this and other operating tests to be administered during this examination.			
c. The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)			
d. Overlap with the written examination and between different parts of the operating test is within acceptable limits.			
e. It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			
2. Walk-Through Criteria	--	--	--
a. Each JPM includes the following, as applicable: • initial conditions • initiating cues • references and tools, including associated procedures • reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee • operationally important specific performance criteria that include: – detailed expected actions with exact criteria and nomenclature – system response and other examiner cues – statements describing important observations to be made by the applicant – criteria for successful completion of the task – identification of critical steps and their associated performance standards – restrictions on the sequence of steps, if applicable			
b. Ensure that any changes from the previously approved systems and administrative walk-through outlines (Forms ES-301-1 and 2) have not caused the test to deviate from any of the acceptance criteria (e.g., item distribution, bank use, repetition from the last 2 NRC examinations) specified on those forms and Form ES-201-2.			
3. Simulator Criteria	--	--	--
The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.			

	Printed Name / Signature	Date
a. Author	James Corridon	1/2/09
b. Facility Reviewer(*)	Owen B Trioco	1/3/09
c. NRC Chief Examiner (#)	Gerard W Laska	2/18/2009
d. NRC Supervisor	Malcolm T. Widmann	02/18/09

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

FINAL

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

Facility: Turkey Point Date of Exam: 2/23/09 Scenario Numbers: 1/2/3 Operating Test No.: 2009-301

	QUALITATIVE ATTRIBUTES	Initials a	b*	c#
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.			
2.	The scenarios consist mostly of related events.			
3.	Each event description consists of • the point in the scenario when it is to be initiated • the malfunction(s) that are entered to initiate the event • the symptoms/cues that will be visible to the crew • the expected operator actions (by shift position) • the event termination point (if applicable)			
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.			
5.	The events are valid with regard to physics and thermodynamics.			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.			
8.	The simulator modeling is not altered.			
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.			
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.			

	Target Quantitative Attributes (Per Scenario; See Section D.5.d)	Actual Attributes	–	–	–
1.	Total malfunctions (5–8)	7/9/9			
2.	Malfunctions after EOP entry (1–2)	2/3/2			
3.	Abnormal events (2–4)	4/4/5			
4.	Major transients (1–2)	1/2/1			
5.	EOPs entered/requiring substantive actions (1–2)	1/2/1			
6.	EOP contingencies requiring substantive actions (0–2)	1/0/0			
7.	Critical tasks (2–3)	2/3/3			

ES-301 **Transient and Event Checklist** **Form ES-301-5**

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

Facility: Turkey Point Date of Exam: 2/23/09 Scenario Numbers: 4 / N/A Operating Test No.: 2009-301

	QUALITATIVE ATTRIBUTES	Initials a	b*	c#
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.			
2.	The scenarios consist mostly of related events.			
3.	Each event description consists of • the point in the scenario when it is to be initiated • the malfunction(s) that are entered to initiate the event • the symptoms/cues that will be visible to the crew • the expected operator actions (by shift position) • the event termination point (if applicable)			
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.			
5.	The events are valid with regard to physics and thermodynamics.			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.			
8.	The simulator modeling is not altered.			
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.			
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.			

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

ES-301 **Transient and Event Checklist** **Form ES-301-5**

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1ES-301, Rev. 9 **Transient and Event Checklist** **Form ES-301-5**

Facility: Turkey Point Units 3 & 4 Date of Exam: 02/23/2009 Operating Test No.: 2009-301

APPLICANT	EVENT TYPE	Scenarios															TOTAL	MINIMUM(*)		
		1			2			3			4									
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION									
		SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP					R	I	U
RO	RX		4			3,5			3			3	1					1	1	0
	NOR			4			3			3			3					1	1	1
	I/C		1,2	1,3		2,4	1,2,5		1,4	2,5		4	2					4	4	2
	MAJ		5	5		6	6		6	6		5	5					2	2	1
	TS																	0	2	2
SRO-I	RX	4						3			1,3							1	1	0
	NOR				5													1	1	1
	I/C	1,2,3			1,2,3,4			1,2,4,5			2,4							4	4	2
	MAJ	5			6			6			5							2	2	1
	TS	1,3,4			2,4,5			1,2			2,3,4							0	2	2
SRO-U	RX	4						3			1,3							1	1	0
	NOR				5													1	1	1
	I/C	1,2,3			1,2,3,4			1,2,4,5			2,4							4	4	2
	MAJ	5			6			6			5							2	2	1
	TS	1,3,4			2,4,5			1,2			2,3,4							0	2	2
	RX																	1	1	0
	NOR																	1	1	1
	I/C																	4	4	2
	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 do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in 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.

FINAL

ES-301 **Competencies Checklist** **Form ES-301-6**

Facility: Turkey Point Date of Examination: 2/23/09 Operating Test No.: 2009-301

Competencies	APPLICANTS															
	RO ☑ SRO-I ☐ SRO-U ☐				RO ☐ SRO-I ☑ SRO-U ☐				RO ☐ SRO-I ☐ SRO-U ☑				RO ☐ SRO-I ☐ SRO-U ☐			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	1,2,3	1,2,4,5	1,2,3,4,5	1,2,3,4	1,2,3	1,2,4,5	1,2,3,4,5	1,2,3,4	1,2,3	1,2,4,5	1,2,3,4,5	1,2,3,4				
Comply With and Use Procedures (1)	1,2,3,4	2,3,4,5	1,3,4,6	2,3,4	All	2,3,4,5	1,3,4,6	2,3,4	All	2,3,4,5	1,3,4,6	2,3,4				
Operate Control Boards (2)	All	All	1,2,3,4,6	1,3,4,5	All	All	1,2,3,4,6	1,3,4,5	All	All	1,2,3,4,6	1,3,4,5				
Communicate and Interact	All	All	All	All	All	All	All	All	All	All	All	All				
Demonstrate Supervisory Ability (3)		N/A			All	All	All	All	All	All	All	All				
Comply With and Use Tech. Specs. (3)		N/A			1,3,4,5	2,4,5,6	1,2,6	2,3,4,5	1,3,4,5	2,4,5,6	1,2,6	2,3,4,5				

Notes:
(1) Includes Technical Specification compliance for an RO.
(2) Optional for an SRO-U.
(3) Only applicable to SROs.

Instructions:

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

2/20/09

Facility: Date of Exam:

Tier	Group	RO K/A Category Points												SRO-Only Points					
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2		G*		Total
1. Emergency & Abnormal Plant Evolutions	1	3	3	3	N/A			3	3	N/A		3	18	3		3		6
	2	2	1	2				2	1			1	9	2		2		4
	Tier Totals	5	4	5				5	4			4	27	5		5		10
2. Plant Systems	1	3	2	3	3	2	3	2	3	2	2	3	28	2		3		5
	2	1	0	1	1	1	1	1	1	1	1	1	10	0		2		3
	Tier Totals	4	2	4	4	3	4	3	4	3	3	4	38	2		5		8
3. Generic Knowledge and Abilities Categories		1			2			3			4		10	1	2	3	4	7
		2			2			3			3			1	2	2	2	

1. Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, the "Tier Totals" in each K/A category shall not be less than two).
2. The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by ±1 from that specified in the table based on NRC revisions. The final RO exam must total 75 points and the SRO-only exam must total 25 points.
3. Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems that are not included on the outline should be added. Refer to ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements.
4. Select topics from as many systems and evolutions as possible; sample every system or evolution in the group before selecting a second topic for any system or evolution.
5. Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively.
6. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
7. *The generic (G) K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system.
8. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IRs) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note # 1 does not apply). Use duplicate pages for RO and SRO-only exams.
9. For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
007EK2.03	Reactor Trip - Stabilization - Recovery / 1	3.5	3.6	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Reactor trip status panel
008AG2.2.44	Pressurizer Vapor Space Accident / 3	4.2	4.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions
009EA2.06	Small Break LOCA / 3	3.8	4.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Whether PZR water inventory loss is imminent
015AA2.08	RCP Malfunctions / 4	3.4	3.5	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	When to secure RCPs on high bearing temperature
022AK1.02	Loss of Rx Coolant Makeup / 2	2.7	3.1	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Relationship of charging flow to pressure differential between charging and RCS
025AG2.4.46	Loss of RHR System / 4	4.2	4.2	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to verify that the alarms are consistent with the plant conditions.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
026AA2.06	Loss of Component Cooling Water / 8	2.8	3.1	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	The length of time after the loss of CCW flow to a component before that component may be damaged
029EG2.4.4	ATWS / 1	4.5	4.7	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.
040AK1.04	Steam Line Rupture - Excessive Heat Transfer / 4	3.2	3.6	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Nil ductility temperature
054AK1.02	Loss of Main Feedwater / 4	3.6	4.2	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Effects of feedwater introduction on dry S/G
055EK2.04	Station Blackout / 6			☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Pumps
056AA1.25	Loss of Off-site Power / 6	2.9	2.9	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Main steam supply valve control switch

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
057AK3.01	Loss of Vital AC Inst. Bus / 6	4.1	4.4	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Actions contained in EOP for loss of vital ac electrical instrument bus
058AA1.01	Loss of DC Power / 6	3.4	3.5	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Cross-tie of the affected dc bus with the alternate supply
062AK3.02	Loss of Nuclear Svc Water / 4	3.6	3.9	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	The automatic actions (alignments) within the nuclear service water resulting from the actuation of the ESFAS
065AK3.04	Loss of Instrument Air / 8	3	3.2	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Cross-over to backup air supplies
077AA1.01	Generator Voltage and Electric Grid Disturbances / 6	3.6	3.7	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Grid frequency and voltage
WE11EK2.1	Loss of Emergency Coolant Recirc. / 4	3.6	3.9	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
001AK3.02	Continuous Rod Withdrawal / 1	3.2	4.3	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Tech-Spec limits on rod operability
005AA1.01	Inoperable/Stuck Control Rod / 1	3.6	3.4	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	CRDS
024AA2.01	Emergency Boration / 1	3.8	4.1	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Whether boron flow and/or MOVs are malfunctioning from plant conditions
036AK3.02	Fuel Handling Accident / 8	2.9	3.6	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Interlocks associated with fuel handling equipment
059AK1.02	Accidental Liquid RadWaste Rel. / 9	2.6	3.2	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Biological effects on humans of various types of radiation, exposure levels that are acceptable for nuclear power plant personnel and the units used for radiation-intensity measurements and for radiation exposure levels
067AG2.4.49	Plant Fire On-site / 9 8	4.6	4.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
WE08EA1.3	RCS Overcooling - PTS / 4	3.6	4.0	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Desired operating results during abnormal and emergency situations.
WE09EK1.3	Natural Circ. / 4	3.3	3.6	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Annunciators and conditions indicating signals, and remedial actions associated with the (Natural Circulation Operations).
WE14EK2.1	Loss of CTMT Integrity / 5	3.4	3.7	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
003K1.13	Reactor Coolant Pump	2.5	2.5	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	RCP bearing lift oil pump
003K6.04	Reactor Coolant Pump	2.8	3.1	☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)	Containment isolation valves affecting RCP operation
004A2.13	Chemical and Volume Control	3.6	3.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Low RWST
005K6.03	Residual Heat Removal	2.5	2.6	☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)	RHR heat exchanger
006A2.06	Emergency Core Cooling	3.3	3.5	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Water hammer
007A4.09	Pressurizer Relief/Quench Tank	2.5	2.7	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	Relationships between PZR level and changing levels of the PRT and bleed holdup tank

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
008A4.03	Component Cooling Water	2.7	2.5	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	Throttling of the CCW pump discharge valve
008K3.01	Component Cooling Water	3.4	3.5	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	Loads cooled by CCWS
010K1.02	Pressurizer Pressure Control	3.9	4.1	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	ESFAS
010K5.01	Pressurizer Pressure Control	3.5	4.0	☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Determination of condition of fluid in PZR, using steam tables
012A3.04	Reactor Protection	2.8	2.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Circuit breaker
013K2.01	Engineered Safety Features Actuation	3.6	3.8	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of electrical power supplies to the following:(CFR: 41.7)	ESFAS/safeguards equipment control
022K4.03	Containment Cooling	3.6	4.0	☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	Automatic containment isolation

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
026A1.03	Containment Spray	3.5	3.5	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	Containment sump level
026A2.04	Containment Spray	3.9	4.2	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Failure of spray pump
039A1.05	Main and Reheat Steam	3.2	3.3	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	RCS T-ave
059K3.03	Main Feedwater	3.5	3.7.	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	S/GS
061K4.06	Auxiliary/Emergency Feedwater	4.0	4.2	☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	AFW startup permissives
061K6.08	Auxiliary/Emergency Feedwater	2.6	2.7	☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)	Pumps

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
062K1.03	AC Electrical Distribution	3.5	4.0	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	DC distribution
063K2.01	DC Electrical Distribution	2.9	3.1	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of electrical power supplies to the following:(CFR: 41.7)	Major DC loads
064G2.4.30	Emergency Diesel Generator	2.7	4.1	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of events related to system operations/status that must be reported to internal orginizations or outside agencies.
064K3.02	Emergency Diesel Generator	4.2	4.4	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	ESFAS controlled or actuated systems
073K5.01	Process Radiation Monitoring	2.5	3.0	☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Radiation theory, including sources, types, units and effects
076G2.1.23	Service Water	4.3	4.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to perform specific system and integrated plant procedures during all modes of plant operation.
076K4.06	Service Water	2.8	3.2	☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	Service water train separation

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
078A3.01	Instrument Air	3.1	3.2	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Air pressure
103G2.2.36	Containment	3.1	4.2	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions of operations

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
011K6.06	Pressurizer Level Control	2.5	2.8	☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)	Correlation of demand signal indication on charging pump flow valve controller to the valve position
014G2.4.35	Rod Position Indication	3.8	4.0	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects
016K3.07	Non-nuclear Instrumentation	3.6	3.7	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	ECCS
017K4.03	In-core Temperature Monitor	3.1	3.3	☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	Range of temperature indication
027A4.04	Containment Iodine Removal	2.8	2.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	Filter temperature
035A1.01	Steam Generator	3.6	3.8	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	S/G wide and narrow range level during startup, shutdown and normal operations
041K1.06	Steam Dump/Turbine Bypass Control	2.6	2.9	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	Condenser

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
045A2.17	Main Turbine Generator	2.7	2.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Malfunction of electrohydraulic control
055A3.03	Condenser Air Removal	2.5	2.7	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Automatic diversion of CARS exhaust
071K5.04	Waste Gas Disposal	2.5	3.1	☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Relationship of hydrogen/oxygen concentrations to flammability

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.18	Conduct of operations	3.6	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to make accurate, clear and concise logs, records, status boards and reports.
G2.1.45	Conduct of operations	4.3	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to identify and interpret diverse indications to validate the response of another indication
G2.2.35	Equipment Control	3.6	4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to determine Technical Specification Mode of Operation
G2.2.39	Equipment Control	3.9	4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of less than one hour technical specification action statements for systems.
G2.3.11	Radiation Control	3.8	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to control radiation releases.
G2.3.14	Radiation Control	3.4	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities
G2.3.4	Radiation Control	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation exposure limits under normal and emergency conditions

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.4.13	Emergency Procedures/Plans	4.0	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of crew roles and responsibilities during EOP usage.
G2.4.23	Emergency Procedures/Plans	3.4	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the bases for prioritizing emergency procedure implementation during emergency operations.
G2.4.38	Emergency Procedures/Plans	2.4	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to take actions called for in the facility emergency plan, including supporting or acting as emergency coordinator.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
011EG2.2.37	Large Break LOCA / 3	3.6	4.6	☐☐☐☐☐☐☐☐☐☐☑ This is a Generic, no stem statement is associated.	Ability to determine operability and/or availability of safety related equipment
025AG2.4.8	Loss of RHR System / 4	3.8	4.5	☐☐☐☐☐☐☐☐☐☐☑ This is a Generic, no stem statement is associated.	Knowledge of how abnormal operating procedures are used in conjunction with EOPs.
026AA2.01	Loss of Component Cooling Water / 8	2.9	3.5	☐☐☐☐☐☐☐☑☐☐☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Location of a leak in the CCWS
056AA2.54	Loss of Off-site Power / 6	2.9	3	☐☐☐☐☐☐☐☑☐☐☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Breaker position (remote and local)
065AG2.2.4	Loss of Instrument Air / 8	3.6	3.6	☐☐☐☐☐☐☐☐☐☐☑ This is a Generic, no stem statement is associated.	(multi-unit) Ability to explain the variations in control board layouts, systems, instrumentation and procedural actions between units at a facility.
WE04EA2.1	LOCA Outside Containment / 3	3.4	4.3	☐☐☐☐☐☐☐☑☐☐☐ Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
003AA2.01	Dropped Control Rod / 1	3.7	3.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Rod position indication to actual rod position
028AA2.03	Pressurizer Level Malfunction / 2	2.8	3.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Charging subsystem flow indicator and controller
068AG2.4.20	Control Room Evac. / 8	3.8	4.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of operational implications of EOP warnings, cautions and notes.
we10EG2.4.31	Natural Circ. With Seam Void/ 4	4.2	4.1	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of annunciators alarms, indications or response procedures

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
003G2.4.31	Reactor Coolant Pump	4.2	4.1	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of annunciators alarms, indications or response procedures
005G2.2.25	Residual Heat Removal	3.2	4.2	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.
007A2.02	Pressurizer Relief/Quench Tank	2.6	3.2	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Abnormal pressure in the PRT
010G2.1.19	Pressurizer Pressure Control	3.9	3.8	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to use plant computer to evaluate system or component status.
026A2.07	Containment Spray	3.6	3.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Loss of containment spray pump suction when in recirculation mode, possibly caused by clogged sump screen, pump inlet high temperature exceeded cavitation, voiding) or sump level below cutoff (interlock) limit

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
034A3.02	Fuel Handling Equipment	2.5	3.1	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Load limits
072G2.2.44	Area Radiation Monitoring	4.2	4.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions
079G2.2.3	Station Air	3.8	3.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	(multi-unit license) Knowledge of the design, procedural and operational differences between units.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.18	Conduct of operations	3.6	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to make accurate, clear and concise logs, records, status boards and reports.
G2.2.1	Equipment Control	4.5	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to perform pre-startup procedures for the facility, including operating those controls associated with plant equipment that could affect reactivity.
G2.2.39	Equipment Control	3.9	4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of less than one hour technical specification action statements for systems.
G2.3.4	Radiation Control	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation exposure limits under normal and emergency conditions
G2.3.7	Radiation Control	3.5	3.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to comply with radiation work permit requirements during normal or abnormal conditions
G2.4.17	Emergency Procedures/Plans	3.9	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of EOP terms and definitions.
G2.4.35	Emergency Procedures/Plans	3.8	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects

FINAL

Tier / Group	Randomly Selected K/A	Reason for Rejection
T2G2	011K6.06	Not part of plant equipment. Replaced with 011K6.03
T2G2	055A3.03	Not part of plant equipment. Replaced with 033A3.02
T2G1	061K6.08	All information listed on sample plan is for K/A 061K6.02. Corrected typo for listed K/A to 061K6.02
T2G1	008A4.03	TASK Not performed at T.P. Replaced with 008A4.01

Facility: TURKEY POINT Date of Exam: March 2009 Exam Level: RO [X] SRO [X]

Item Description					Initial a	Initial b*	Initial c#
1.	Questions and answers are technically accurate and applicable to the facility.				SW	✓	✓
2.	a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.				SW	✓	✓
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401				SW	✓	✓
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).				SW	✓	✓
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: [X] the audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or __ the examinations were developed independently; or __ the licensee certifies that there is no duplication; or __ other (explain)				SW	✓	✓
6.	Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank: 8/6	Modified: 27/4	New: 40/21	SW	✓	✓
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: 30/9	C/A: 45/16		SW	✓	✓
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.				SW	✓	✓
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.				SW	✓	✓
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.				SW	✓	✓
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.				SW	✓	✓

	Printed Name / Signature	Date
a. Author	SCOTT MEIER /	3/6/09
b. Facility Reviewer (*)	James Corder	3/6/09
c. NRC Chief Examiner (#)	GERARD W. LASCAK	3/16/2009
d. NRC Regional Supervisor	MALCOLM T. WIDMANN /	03/16/09

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

ES-403, Rev. 9 | **Written Examination Grading Quality Checklist** | **Form ES-403-1**

Facility: Turkey Point 3 & 4 Date of Exam: 3/18/2009 Exam Level: **RO/SRO**

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

	Printed Name/Signature	Date
a. Grader	GERARD W. LASKA	4/08/2009
b. Facility Reviewer(*)	N/A	N/A
c. NRC Chief Examiner (*)	RICHARD S. BALDWIN	4/09/2009
d. NRC Supervisor (*)	MALCOLM T. WIDMANN	04/14/09

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

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation

Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
3. Check the appropriate box if a psychometric flaw is identified:
   - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
   - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
   - The answer choices are a collection of unrelated true/false statements.
   - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
   - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
   - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
   - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
   - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
   - The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
6. Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
1	H	2												E	**007EK2.03** Question appears to match K/A. 4-OSP -049.1 "Reactor Protection System Logic Test" was listed as a reference, but was not included in the provided reference material. (Select OSPs were included on the stick, but this one was not. Otherwise question appears to be SAT. Are all the abbreviations to be listed as in the note at the bottom of the page? I not sure that this is acceptable. **NEW** **Made some changes to stem, removed the notes at the bottom of the page.** **SAT 2/11/2009.**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
2	H	2	X				X							U	**008AG2.2.44** Question appears to match K/A. What power is Unit 4 at presently? Does the manual of the PORV closure take place in the control room? What PORV is associated with PT-4-445? If the affected PORV indicating lights are green, then the block valve is not required to be closed until it is determined that the valve is leaking by in step 13 of the ONOP. Step 3 of the ONOP has the operator place the spray valves in manual and verify that they are closed. One could argue that by taking manual control of PC-4-444J controller you could also ensure that the spray valves would be closed. (I realize that this is not the problem in this question but one could argue that this is a correct action) D could also be argued as correct. Even if the lights are out and the procedure step does not specifically direct this, it is typical to inform the Electrical Group if the component if faulty. **NEW** Changed the stem and distractors to remove the other correct answer. **SAT 2/11/2009**
3	H	2				X								U	009EA2.06 Question appears to match K/A. Distractor B is not plausible, if you could stabilize pressurizer level why would you transition to E-0? Suggest changing the leakage to 150 gpm. This would test the knowledge of the seal leakoff flow, and if this flow is forgotten would add plausibility to distractor A. Is the 3C charging pump tagged out of service? **NEW** Rewrote question Changed stem and distractors. Question appears to be **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
4	F	2										X		U	**015AA2.08** Question kind of matches K/A. What power is the plant at? If I assumed the plant was in mode 3, and these conditions existed, there would not be a correct answer. Need to tighten the question up some. (anytime that the plant is mode 1 above P-9, and two RCPs have to be secured you are going to trip the reactor) Are these setpoints the same in the normal operating procedure, or precaution and limitations? If so, then we could cover up the stem telling us we are in the ONOP and just ask the "which one of the following…"and the question will have nothing to do with the ONOP. In this case the question would not meet the K/A. Also using 3A RCP has a high pump bearing temperature in three distractors tends to let the applicant know that this is probably a true statement. **NEW** **Made Changes as requested. SAT 02/18/2009**
5	H	2				X	X							U	**022AK1.02** Question appears to match K/A. Kind of confusing. Not sure that A, B, or C are plausible. How could the delta P remain unchanged? How could it continuously increase or decrease, if would have to reach the maximum delta p or equalize? So why would anyone choose A, B, or C. Without any boundaries on the question, one could also argue that all are correct at a certain point in time. Question will require some modifications. **NEW** Replaced question, and changed distractors A and C. New question kind of matches a tough K/A. In a backwards way. **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
6	H	2				X								U	**025AG2.4.46** Question appears to match K/A. Will FT-605 failing high cause FCV to close? (will any interlocks cause this valve to close) If not this is not a plausible distractor. If a failure of PC-3-600 results in a closure of MOV-3-862B, would it not already be closed with the plant in these conditions? With two distractors that are not plausible, this question is Unsat. **NEW** **Changed all distractors to increase plausibility** **SAT 2/11/2009**
7	F	2				X								E	**026AA2.06** Question appears to match K/A. D distractor does not appear to be plausible. Need to change distractor D. Changed distractor D. **MODIFIED/BANK** **SAT 2/11/2009**
8	F	2												S	**029EG2.4.4** Question appears to match K/A. Does not appear to be modified. (very similar to original question). Otherwise SAT **BANK** **SAT 2/11/2009**
9	F	2				X								E	**040AK1.04** Question appears to match K/A. As written C is not plausible. When would you have to

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
															maintain 345 gpm to ALL S/Gs? Might try changing it to any S/G. Is there another flow rate that is required in the procedures? Not really sure if 345 is plausible in this condition. Try the 100 gpm from distractor in question 10. Question is listed as modified but the original question is not included. **BANK** **Worked on new question. Will bring another back tomorrow.** **Made changes SAT 2/18/2009**
10	F	2				X								U	**054AK1.02** Question appears to match K/A. In this question, the leak occurs at a point where re-initiation of feedwater flow is impossible, so why would distractors A, C, and D be plausible? Also in a faulted S/G scenario the faulted S/G is never fed again unless all S/Gs are faulted and it has the smallest leak. Made changes work on distractor C. **NEW** **Work on C response Made changes to distractor C Okay SAT 2/18/2009**
11	H	2	X											E	**055EK2.01 Change K/A to 055EK3.02** Question appears to match K/A. Is it typical for Unit 3 operators to control Unit 4 HHSI pumps? Someone will ask "what are the conditions on Unit 4"? Need to have a statement like all other equipment operated per design. **NEW** Made changes as requested added IAW to stem. **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
12	H	2				X								U	**056AA1.25** Question appears to match K/A. At most sites if an MSIV fails closed the plant will not remain online with or without site power. Distractors A and B do not appear to be plausible. **NEW** **Rewrote question SAT 2/11/2009**
13	F	2	X								X			U	**057AK3.01** Question appears to match K/A. Teaching in stem: "to eliminate the failed channel output". What position is this switch normally kept in? All that matters is what position the switch was in, after the failure of the vital bus the switch position is changed to allow restoration of letdown. Backwards logic. Need to work on this question. After reading some of the supplied material it seems that this switch position is normally left in position II. **NEW** Made some changes, still some work to do. 02/11/2009 Made changes SAT 02/18/2009
14	H	2												S	**058AA1.01** Question appears to match K/A. SAT **NEW** **SAT 2/11/2009**
15	H	2				X						X		U	**062AK3.02** Question may not match K/A. The licensee needs to show how this question matches the K/A. The only answer that seems to be plausible is the correct answer. **NEW** **Going to replace/Rework** **Remove 3A and 3C ICW pumps trip from stem (teaching) Then SAT 02/18/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
16	F	2	X				X					X		U	**065AK3.04** Question does not totally meet the K/A. All of the reasons are the same, to provide air to Unit 4. Why is the order of sources like this in the procedure? Question also potentially has two or three correct answers. Although you state in the stem that Instrument Air compressors are running properly someone will think that maybe all the compressors were not started and pick distractor C. **NEW** **Made changes to stem and all distractors. Appears to be.** **SAT 2/11/2009**
17	H	2				X								E	**077AA1.01** Question appears to match K/A. Would Unit 3 be tied to the grid at 5% power? Distractor D does not appear to be plausible for this condition. **NEW** **Made Changes as requested.** **SAT 2/11/2009**
18	F	2												S	**WE/11EK2.1** Question appears to match K/A. Does NOT appear to be modified. (Some eithers and Boths are moved around in distractors c and d. Answer is the same as the 2004 exam. This is actually a fundamental level question. Otherwise SAT. **BANK** **Changed the stem to read better.** **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
19	F	1				X								U	**001AK3.**02 Question kind of matches K/A. Without knowing what the malfunction was how can you determine if the Rod Control System is operable or not. If the malfunction was impulse pressure channel failure or an NI failing, even the rod control system would still be operable. (even though it is not in automatic) So, why would the actual rods even be considered as inoperable? There are not any plausible distractors in this question. Rods are often operated in manual in Westinghouse plants. I also don't believe that there is a technical specification on the rod control system. **NEW** **Made changes to 3 out of 4 of the distractors. And changed the stem.** **SAT 2/11/2009**
20	F	2	X			X								U	**005KAA1.01** Question appears to match K/A. Distractors B and D do not seem to be plausible. The urgent failure alarm will not actuate until rod motion is attempted, and no group 1 rods receive a signal. The stem is confusing, it suggests that the alarm will come in during the disconnect switch alignment. The alarm will not actuate until rods are moved. **Modified/BANK** **Reworded complete question.** **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
21	H	2	X			X								U	**024AA2.01** Question appears to match K/A. Distractor A is not plausible, if you verified that the A loop charging valve was open, the procedure has you go to the next step. This distractor is not in accordance with the procedure, and will still not increase boric acid flow. Distractor B is not plausible, why would you isolate the VCT if the RWST was not aligned. As written this would leave the Chg pump with out a suctions source. The stem states that the MOV is placed in open and both red and green lights are out, an applicant could assume that the valve never opened at all and question how he could have 20 gpm flow. If the MOV switch was placed in open would not the green and red lights illuminate, and when the valve tripped then both go out. This would give the indications that the valve attempted to open but tripped, and the flow indicated is inadequate. **MODIFIED/BANK** **Changed several distractors and parts of stem as requested.** **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
22	F	2										X		U	**036AK3.02** Question does not meet the K/A. The K/A asks for **reasons for interlocks** associated with Fuel handling equipment as they apply to the Fuel Handling Incidents. This question does not test an interlock, but an alarm. Essentially the reason is in the stem, the bridge crane is to close to the… I believe there are many more interlocks that could be tested. If there are not interlocks associated with the fuel handling equipment then I will consider the alarm. The reference used is also a normal operating procedure. This is an abnormal procedure and should be referenced to an abnormal procedure is available. **NEW** **Replaced Question changed stem on replaced question. SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
23	H	2										X		U	**059AK1.**02 While this may be considered a accidental radwaste leak, however it is still not meeting the K/A. The K/A asks for the operational implications of the biological effects on humans of various types of radiation, exposure levels that are acceptable for nuclear power plant personnel, and the units used for radiation-intensity measurements and for radiation exposure levels. This question states the basis for the limits on an SGTR release, however there is not a release present in the question, and the limit is a less than 10 CFR 100 limits. What units are these in, what is the limit, etc. This question needs to be replaced. Listed as **NEW**, but this question is listed in many **banks.** **Still to work on 02/11/2009** **Question rewritten SAT 02/12/2009**
24	F	2												E	**067AG2.4.49** Question kind of matches K/A, although there is not any operation of components or controls, just the PA system. Is the page normally cross-connected? If it is not this should be in the distractors, or someone could argue that there is not a correct answer. **Replaced Question** **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
25	F	2				X								U	**W/E08EA1.3** Question appears to match K/A. Distractors A, B, and C are not plausible. After the reactor is tripped the steam flow indicators do not accurately reflect correct steam flow, and the auxiliary feed water systems does not usually have a lbm/hr meter. I also do not know of a place in the procedures that direct the operator to feed based on RCS pressure, or Steam generator pressure. **Modified/BANK** **Changed Question as requested. SAT 2/11/2009**
26	H	2												S	**W/E09EK1.3** Question appears to meet K/A. Change the stem to read which ONE of the following describes the correct action required to mitigate this event IAW ES-0.2. Otherwise SAT **BANK** **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
27	H	2										X		U	**W/E14EK2.1** Question does not meet the intent of the K/A. This question tests the lineup that is required for the control room and is typically aligned anytime that there is an ESF actuation or a control room Normal Air Intake Radiation monitor alarm. How does it relate to the High containment pressure except that there may be leakage from containment? I understand that it is a step in the procedure, but it does not deal with the high containment pressure. Need to develop a question that tests the concepts on how to deal with the high containment pressure. **BANK** **Replaced Question** **SAT 2/11/2009**
28	F	2				X								U	**003K1.13** Question appears to meet the K/A. Distractors c and d are not plausible. Most RCPs have an interlock that prevents the RCP from starting unless the oil lift pump has produced a certain pressure. Why would anyone think that if it is "warm" you could start the RCP without the oil lift pump running? Your lesson plan discusses an oil lift pressure of 650 psig will satisfy a permissive to allow starting of the RCP. **MODIFIED/BANK** **Made changes to stem and distractors. SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
29	F	2												S	**003K6.04** Question appears to match K/A. Not very discriminating. SAT **MODIFIED/BANK** **SAT 2/11/2009**
30	H	2				X								E	**004A2.13** Question appears to match K/A. Three of the choices state that it is okay for the pump to continue operating only one distractor states that the pump should be stopped. Look for some other items to be used that could improve question symmetry. **NEW** **Made several changes to stem and to one distractor. SAT 2/11/2009**
31	F	2				X								U	**005K6.03** Question kind of meets K/A. Distractors C and D are not plausible. With the plant transferring to Cold leg recirculation, the S/Gs would not be coupled to the RCS. In fact they may be adding heat at this point. **NEW** **Will get another examiner to look at plausibility.** **Distractor C on new question is not plausible. Need to fix distractor C.**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
32	H	2												S	**006A2.06** Question kind of matches K/A. **Need to ensure that the other distractors are incorrect.** **NEW** **Have someone look at distractor B. The question does not include procedures as stated in the K/A. need to add procedure actions to correct, control or mitigate.**
33	F	2	X				X							U	**007A4.09** Question appears to match K/A. The stem should state IAW 3-ONOP-041.5. The question as written has two correct answers, Both A and B. **NEW** **Replaced Question** **SAT 2/11/2009**
34	F	2												E	**008A4.03** Question appears to match K/A. Need to state in the stem IAW 3-OSP- 030.1. **NEW** **Changed as Requested.** **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
35	H	2												E	**008K3.01** Question appears to match K/A. The off-normal procedure (ONOP-4-041.1) has the operators manually open MOV-4-626. Is this really what would happen, or would the valve be opened from the main control room. The reference that you provided I believe uses the wrong path through the procedure. Does MOV-4-6386 have any auto trip features? If not this valve is not plausible. **NEW** **Have another Examiner look at Question to determine if it is of proper discriminatory value.** **Changed questions some.** **(2/18/2009)Changed stem to say: Based on these conditions, which one of the following identifies the impact on RCP operation and the required operator actions in accordance with ARP…**
36	H	2				X								U	**010K1.02** Question appears to match K/A. Is there any signal that blocks the opening of pressurizer spray valves? If not, Distractors B and C are not plausible. **NEW** **Made changes to stem and distractors.** **Staff wanted to reverse order on distractor parts.** **02/11/2009** **NRC Staff rewrote question.**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
37	H	2												E	**010K5.01** Question appears to match K/A. Operational validity, is can the RCS pressure be at 2100 psig with steam space temp at 600ºF? Can these conditions be achieved on the simulator? Also need to have a value lower than 1118 psig. **NEW** **Replaced stem and distractors.** **SAT 2/11/2009**
38	F	2												U	**012A3.04** Not Sure that this question matches the K/A. I will have another examiner review this K/A. It does not appear that we are testing the circuit breaker part of the K/A. (If you are referring to reactor trip breakers, they are specifically covered in A3.07. How are C and D plausible with the operator taking actions that will only affect feed flow, and S/G levels? **NEW** **Remove nots from distractors. Then SAT 2/11/2009** **Remove "Related to the loss of 3P06" From the stem. Start with WOOTF**
39	H	2				X								E	**013K2.01** Question appears to match K/A. Does 3D01 and 3D23 supply DC power to Unit 4 ICW pumps? If so, this question is SAT. If not we will need to figure something else out. **NEW** **SAT 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
40	F	1												U	**022K4.03** Question does not really meet the K/A. What design feature are we testing? Depending on the size of the SGTR the plant may not SI on its own. These automatic plant responses only occur if an SI occurs. At this level the question is not very discriminating. **NEW** Changed question still need to verify that the system works the way they think it does. Made changes to question appears to be SAT 2/18/2009
41	H	2				X								E	**026A1.03** Question appears to match the K/A. Need to inform operators the point in ES-1.3 that is being performed. If operators assume that cold leg recirculation is established, then only one CS pump can be operated. This would make D distractor not plausible. **NEW** Discovered other concerns with question after further review, licensee will rewrite questions. Still need to look at this one the replacement question also has issues and overlaps with question 83.
42	H	2										X		E	**026A2.04** Question appears to match K/A. What procedure directs these actions? If procedure actions are not used to mitigate this event, then it does not meet the K/A. **NEW** Made changes to stem. **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
43	H	2	X											E	**039A1.05** Question appears to match K/A. Is this how a normal startup is performed? As written B distractor does not appear to be discriminating. **NEW** **Made changes to stem and distractor B.** **SAT 02/12/2009**
44	H	2		X		X						X		U	**059K3.03** Question kind of matches K/A. This question really addresses the effect that a loss of feed pump will have on the turbine (will a runback occur or not) The question may also help to answer question # 38 in that you state 3A S/G level is 63% and stable, and you state in this question the program levels of 50 and 60%. When does the plant not get a runback on a failure of a MFW pump? If a runback always occurs, then distractors A and B are not plausible. You could state the runback will go to 45% reactor power, or 45% based on turbine impulse pressure. **NEW** **Replaced Question.** **SAT 02/12/2009**
45	F	2				X								E	**061K4.06** Question appears to match K/A. Distractor C does not appear to be plausible. At what time would a loss of a 4KV bus only start the #1 train of AFW? Need to fix distractor C. **Modified/BANK** **After much discussion this question appears to be SAT.** **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
46	F	2				X								E	**061K6.02** Question appears to match K/A. Distractor C needs to be enhanced. (Receives an open signal until the pump trips, valves will go closed). **Modified/BANK** **SAT 02/12/2009**
47	H	2												E	**062K1.03** Question appears to match K/A. Why do you state that the 4A KV bus and its associated Load centers are out of service? Why not state that the 4A KV bus Is de-energized, or can these buses receive power from other sources? **NEW** **SAT 02/12/2009**
48	F	2												S	**063K2.01** Question appears to match K/A. What does the AS inverter normally supply? Just trying to make sure that Distractor B is plausible. Otherwise SAT **NEW** **Removed 3P93 from stem** **SAT 02/12/2009**
49	F	2												E	**064G2.4.30** Question appears to match K/A. Distractor B is not credible. If the EDG is operable, why would it have to be reported to the NRC Ops Center. State in the stem and the reportability requirements to the NRC. In distractor B state that only the NRC resident is required to be notified of this condition. **NEW** **Operations agreed that because it was in TS and ADM that reportability was RO knowledge. Added**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
															IAW TS. **SAT 02/12/2009**
50	H	2				X								E	**064K3.02** Question appears to match K/A. Distractor D is not plausible, why would you align the two unit 4 HHSI pumps to supply unit 3 but keep the suctions aligned to the Unit 4 RWST? Does not make sense. **NEW** Made changes as requested to the D distractor. **SAT 02/12/2009**
51	F	2												E	**073K5.01** Question appears to match K/A. An applicant need only know how N-16 gamma effects are minimized and the type of detector it is. The part about radiation energy levels are moot. **NEW** **Made changes.** **SAT 02/12/2009**
52	F	2				X								U	**076G2.1.3** Question appears to match K/A. Distractors C and D are not plausible for single pump operation. **NEW** **Made changes as requested** **SAT 02/12/2009**
53	F	2												S	**076K4.06** Question appears to match K/A. Not very discriminating. SAT **NEW** **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
54	F	2				X								U	**078A3.01** Question appears to match K/A. Distractors A and C are not plausible. Why would I trip Unit 4 because of a Unit 3 air leak, unless I could not isolate it. Try something like CV-3 -1605 will throttle closed, while CV-4-1605 will fully close, and visa-versa, with the pressures indicated. **MODIFIED/BANK** **Replaced Question.** **SAT 02/12/2009**
55	H	2												S	**103G2.2.36** Question appears to match K/A. SAT **NEW** **SAT 02/12/2009**
56	F	2												S	**011K6.03** Question kind of matches K/A. Remove the part of "in the absence of operator response" and just place (Assume no Operator Action) after the question mark. Otherwise SAT **NEW** **SAT 02/12/2009**
57	H	2	X			X	X							U	**014G2.4.35** Question appears to match K/A. At most plants 115B is an MOV just like LCV 115C, unless this is different at TP then distractor C is not plausible. Because the applicant is not directed by any procedure in this question Distractor D could also be argued as correct. **NEW** **May need New K/A will take one more attempt.** **Replaced KA 014G2.4.4**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
58	F	2				X								U	**016K3.07** Kind of matches K/A. Distractors B,C, and D are not plausible. HHSI pumps only start on an actual SI or LOOP. Reactor trip will only occur if a S/G low level occurred coincident with the bistables, and there is not a S/G level mentioned in the question. **NEW** **Replaced this question. Changed to fail 447 high.** **SAT 02/12/2009**
59	H	2				X								U	**017K4.03** Question appears to match K/A. Distractors B and C are not credible. 700°F is way to low of a temperature for the onset of Zirc-Water reaction. Many plants normally run with hot leg temps above 620°F with any transient, fuel damage would occur. **NEW** **Made some changes to values. Will work on verifying operational validity for ROs.** **Made changes SAT 02/18/2009**
60	H	2												S	**027A4.04** Question appears to match K/A. SAT **NEW** **SAT 02/12/2009**
61	H	2												S	**035A1.01** Question appears to match K/A. SAT **NEW** **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
62	H	2				X								U	**041K1.06** Question appears to match K/A. Distractors A and D are not plausible. For distractor "A" you could use, "valves will reopen when temperature rises to greater than 545°F". For Distractor D, I know of no plant that can block the low condenser vacuum interlock. **Modified/BANK** **Modified Question after comments.** **SAT 02/12/2009**
63	F	2					X							E	**045A2.17** Question appears to match K/A. C is also a correct answer because it is a subset of A. Your procedure states 250 rpm or less. **NEW** **Changed distractors to maximum allowed value.** **SAT 02/12/2009**
64	H	2												S	**033A3.02** Question appears to match K/A. SAT **Modified/BANK** **Still made some changes to the stem and distractors. Question Kind of matches K/A. Very difficult to match K/A.** **SAT 02/12/2009**
65	F	2												E	**071K5.04** Question appears to match K/A. Distractor A does not appear to be plausible. With 3 distractors indicating that the tank must be re-pressurized and then released. **NEW** **Changed distractor D.** **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
66	F	2												S	**G2.1.18** Question appears to match K/A. To make A and B more plausible, add Responsible Reactor Operator. Otherwise SAT **Modified/BANK** **Changed as requested.** **SAT 02/12/2009**
67	H	2				X								E	**G2.1.45** Question appears to match K/A. Distractor B is not plausible. (Not to keen on A either) **NEW** **Changed two distractors.** **SAT 02/12/2009**
68	H	2												S	**G2.2.35** Question appears to match K/A. SAT NEW **SAT 02/12/2009**
69	F	2												S	**2.2.39** Question appears to match K/A. SAT **Modified/BANK** **SAT 02/12/2009**
70	F	2												S	**2.3.11** Question appears to match K/A. SAT **BANK 2004 NRC Exam.** **SAT 02/12/2009**
71	F	2												E	**G2.3.11** Question appears to match K/A. If this is IAW actions of the procedure then it should state so in the stem. **NEW** **SAT 02/12/2009**
72	H	2												S	**G2.3.4** Question appears to match K/A. Format is kind of confusing. SAT. **NEW Changed the format and stem**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
															SAT 02/12/2009
73	F	2												E	**G2.4.13** Question kind of matches K/A. This question is really procedure oriented and not role oriented. Will Get Second opinion. **Replaced question.** **SAT 02/12/2009**
74	H	2												S	G2.4.23 Question appears to match K/A. SAT **Modified/BANK** **SAT 02/12/2009**
75	F	2												E	**G2.4.38** Question appears to match K/A. Distractor D's second half is not plausible, need to change the second half of the distractor. **NEW** **Made changes to stem and all distractors.** **SAT 02/12/2009**

19 Sats, 30 Unsats, and 26 Enhancements

Generic Comments: All bank or modified questions should have the answers rotated from original (i.e. if the answer was originally A, swap the correct answer to B, C, or D.
All modified questions were not totally reviewed as modified, but were treated as a BANK question.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation

Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
3. Check the appropriate box if a psychometric flaw is identified:
   - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
   - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
   - The answer choices are a collection of unrelated true/false statements.
   - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
   - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
   - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
   - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
   - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
   - The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
6. Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
76	F	2										?	?	E	**011EG2.2.37** Question kind of matches K/A. The question does not really determine the operability or availability of safety related equipment but the mode in which the equipment will be used. This question is asking when the piggy-back mode of operation is to be used. I am not sure this is SRO only knowledge. Licensee to provide more insight. **NEW** **Replaced Question Still needs work.** **02/11/2009 NOT SRO only and problems with distractors.** **NRC wrote a version Licensee to review**
77	H	2											X	U	**025AG2.4.8** Question appears to match K/A. Does not appear to be SRO only. This is procedure entry requirements. Some changes were made from the initial draft but changes are still required. **NEW** **Replaced Question** **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
78	F	2											X	U	**026AA2.01** Question appears to match K/A. Not SRO only. Can be answered using only system knowledge. **NEW** **Replaced question, still not SRO only will continue to work. Source document for CCW head tank level.** **02/12/2009**
79	H	2											X	U	**056AA2.54** Question appears to match K/A. Not SRO only. Can be answered using only system knowledge. **NEW** **Replaced question SAT 02/12/2009**
80	F	2											X	U	**065AG2.2.4** Question appears to match K/A. Does not appear to be SRO only. Systems knowledge is all that is required to answer the question. **NEW** **Worked on question, replaced, still needs work. Continue with making it SRO only with which procedure will be used to address the failed closed supply valve.** **02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
81	H	2				X								U	**W/E04EA2.1** Question appears to match K/A Distractors C and D are not plausible. FR-H.5 and FR-I.2 are yellow path procedures and are not required. ERGs contain actions that will mitigate these events. There is not a reason to enter them. However entry is at the discretion of the SRO so they could be considered correct. **NEW** Continue to work. Gerry to Look for other questions.
82	H	2				X							X	U	**003AA2.01** Question appears to match K/A. Is not SRO only this question can be answered by just determining that two rods are out of the T/S limits (± 18) and arrive at the correct answer. No other technical specification knowledge is required. Distractors C and D do not appear to be plausible. **MODIFIED BANK** **Reworked question** **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
83	F	2											X	U	**028AA2.03** Question appears to match K/A. It is very similar to question # 13 on the RO exam. Does not appear to be SRO only. This question can be answered using only systems knowledge. By understanding the system an applicant could figure out in A that letdown has already isolated, therefore A is not correct. The applicant could then look at c and d and know that the master charging pump speed controller would be in auto-lockup, and determine that C and D were not correct, leaving only B as the correct answer. **NEW** Question was replaced. **SAT 02/12/2009**
84	H	2												S	**068AG2.4.20** Question appears to match K/A. SAT **MODIFIED/BANK** **SAT 02/12/2009**
85	F	2												S	**W/E10EG2.4.31** Question kind of matches K/A. Need to add a statement that all conditions for starting the RCP have been met. Otherwise SAT. **NEW** **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
86	H	2	X			X								E	**003G2.4.31** Question appears to match K/A. Why does distractor A state plan to be off line in two hours? The procedure does not state this. Expected Tavg/Tref Δ T changes depending on load reduction rate. The value in distractor C is the manual reactor trip and turbine trip criteria. Therefore this distractor is not credible. Question needs some work. The stem should state IAW 3-ONOP-41.1. **NEW** **Made changes to question, need to further change to make SRO only by having applicant decide whether to use rapid S/D or normal S/D. 02/12/2009**
87	H	2												S	**005G2.2.25** Question kind of matches K/A. Due to the basis in T/S showing the RCS pressure that is required to allow loops to be considered filled, this may meet the SRO only level. Is this value found in any precautions and limitations in GOP's or OP's? The action portion RO knowledge. SAT **NEW** **Rewrote Question SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
88	F	2											X	U	**007A2.02** Question kind of matches K/A. Not SRO only. The applicant need only recall that Both PRT level and pressure are blow normal limits. There is only one distractor that states this, and this is RO knowledge. The actions, being all different do not have to be used to find the correct answer. **NEW** Rewrote question Need another Examiner to look at to determine if it is SRO only. **02/12/2009**
89	H	2				X							X	U	**010G2.1.19** Question appears to match K/A. This is not SRO only knowledge. The RO is required to recognize RCP trip criteria (fold out page), and when it is not met. In this case it is not met. Distractors C and D are not plausible. **NEW** **Replaced Question Work on question.- 2/11/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
90	H	2												U/E	**026A2.07** Question appears to match K/A. The concept of CS operation and RWST level has been tested on the RO portion of the exam. If an applicant got it correct before, he would probably get it right again, if he missed it before, he might miss it again. This is double jeopardy and we are supposed to avoid this. Not Sure it is SRO only knowledge. **NEW** **Still not SRO only need to work on SRO transitions.**
91	H	2				X								U	**034A3.02** Question appears to match K/A. Distractor A is not plausible. There is not any information in the stem that could give the applicant the idea that the fuel could be hung up, the applicant would have to assume this and assumptions are not allowed. Distractor B is also not plausible, there is not information in the stem to lead an applicant to believe that this is a rodded or unrodded assembly, and again an assumption would have to be made. **NEW** Rewrote Question **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
92	H	2				X							X	U	**072G2.2.44** Question appears to match K/A. Where is the 32 foot area? Is it in containment, or is that area called the Mezzanine area? If the 32' foot and 58' areas are outside of containment (or the areas in containment are not called this, then they are not plausible). Not sure this is SRO only, if the RO were alone in the control room he would perform this procedure, and it would direct the RO to evacuate all of containment. **NEW** **Revised Question Have another Examiner look at for SRO only.**
93	H	2				X							X	U	**079G2.2.44** Question kind of matches K/A. Not SRO only. System knowledge is all that is required to answer the question as written. If both compressors cannot be operated why would anyone think is would be a satisfactory back up to the Instrument Air System. Rewrote Question **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
94	F	3				X								U	**G2.1.18** Question appears to match K/A. Distractors Band D are not plausible. There is not any emergency, why would anyone think that the emergency from need be used. Try using a variation of four hour versus eight hour report with the words from distractors A and C. **Revised SAT 02/12/2009**
95	F	2												S	**G2.2.1** Question appears to meet K/A. SAT **NEW** **SAT 02/12/2009**
96	H	2											X	U	**G2.2.39** Question appears to match K/A. Not SRO only. The applicant must know that 4K MCC is required to make D/G operable (RO knowledge) and that both Start up transformers must be verified operable (RO knowledge) only one answer has that both SUTs must be verified operable. Therefore the times after the statement are moot. **NEW** **SAT 02/12/2009**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
97	H	1											X	U	**G2.3.4** Question appears to match K/A. NOT SRO only. These limits are your admin General Employee Training limits for radiation workers at T.P. All individuals are responsible for knowing the limits. **NEW** **Replaced Question** **SAT 02/12/2009**
98	H	2											X	U	**G2.3.7** Question appears to match K/A. Not SRO only. This is basic GET knowledge of limits and RWP requirements. All Radiation workers are required to know this. **NEW** **SAT 02/12/2009**
99	H	2										X		U	**G2.4.17** Question does not appear to match the K/A. What terms or definitions are being examined? (Crew Brief Verses Update)? This are not WOG terms. Furthermore your administrative procedure states that UPDATE are not required for procedures that have immediate operator actions. **Question still not acceptable replace K/A.**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/ S	Explanation
100	F	1				X								E	**G2.4.35** Question appears to match K/A. Will discuss the plausibility of reasons in distractors A and C. **NEW** **Will get another Examiner to look at for SRO only.**

4 Sats, 17 Unsats, and 4 Enhancement

ES-403	Written Examination Grading Quality Checklist	Form ES-403-1

Facility: Turkey Point 3&4 Date of Exam: 3/18/2009 Exam Level: RO ☒ SRO ☒

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

	Printed Name/Signature	Date
a. Grader		
b. Facility Reviewer(*)	OWEN B TRIOLO	3/24/09
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.