

Facility: <u>TURKEY POINT</u>		Date of Examination: <u>Oct 25-29,</u> <u>2010</u>
Developed by: Written - Facility <input checked="" type="checkbox"/> NRC <input type="checkbox"/> // Operating - Facility <input checked="" type="checkbox"/> NRC <input type="checkbox"/>		<u>Nov 10, 2010</u>
Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b) <u>1/22/10</u>	<u>BN</u>
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e) <u>1/22/10</u>	<u>BN</u>
-120	3. Facility contact briefed on security and other requirements (C.2.c) <u>1/22/10</u>	<u>BN</u>
-120	4. Corporate notification letter sent (C.2.d) <u>5/17/10</u>	<u>BN</u>
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 3)]	<u>N/A</u>
{-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) <u>8/4/10</u>	<u>BN</u>
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)} <u>8/10/10</u>	<u>BN</u>
{-45}	8. Proposed examinations (including written, walk-through JPMs, and scenarios, as applicable), supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, and ES-401-6, and any Form ES-201-3 updates), and reference materials due (C.1.e, f, g and h; C.3.d) <u>8/23/10</u>	<u>BN</u>
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202) <u>9/25/10</u>	<u>BN</u>
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202) <u>10/11/10</u>	<u>BN</u>
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f) <u>8/10/10</u>	<u>BN</u>
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g) <u>10/3/10</u>	<u>BN</u>
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h) <u>OP TEST: 10/22/10 WRITTEN: 11/4/10</u>	<u>BN</u>
-7	14. Final applications reviewed; 1 or 2 (if >10) applications audited to confirm qualifications / eligibility; and examination approval and waiver letters sent (C.2.i; Attachment 5; ES-202, C.2.e; ES-204) <u>10/18/10</u>	<u>BN</u>
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k) <u>11/5/10</u>	<u>BN</u>
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i) <u>10/25/10</u>	<u>BN</u>
<p>* 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.</p>		

Facility: Turkey Point 3 & 4		Date of Examination: 10/25/2010		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	SB	CB	N-1
	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.	SB	CB	N-1
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	SB	CB	N-1
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	SB	CB	N-1
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	SB	CB	BK
	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.	SB	CB	BK
	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.	SB	CB	BK
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.	SB	CB	BK
	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	SB	CB	BK
	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.	SB	CB	BK
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	SB	CB	BK
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	SB	CB	BK
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	SB	CB	BK
	d. Check for duplication and overlap among exam sections.	SB	CB	BK
	e. Check the entire exam for balance of coverage.	SB	CB	BK
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	SB	CB	BK
a. Author <u>GREGORY LAUGHLIN / [Signature]</u> b. Facility Reviewer (*) <u>Sean Bloom / [Signature]</u> c. NRC Chief Examiner (#) <u>BRUNO CABALIERO / [Signature]</u> d. NRC Supervisor <u>Edwin L. ... / [Signature]</u>		Printed Name/Signature Date 10/12/10 10/12/10 10-22-10 10/22/2010		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines				

N-1 Written Exam Outline previously approved on 1/22/10.

keid  
10/13/10

Facility: <u>Turkey Point</u>		Date of Examination: <u>November 2010</u>		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	MB	N/A	BDL
	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.	MB		BDL
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	MB		BDL
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	MB		BDL
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.			
	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.		N/A	
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.			
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.		N/A	
	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.		N/A	
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	MB	N/A	BDL
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	MB		BDL
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	MB		BDL
	d. Check for duplication and overlap among exam sections.	MB		BDL
	e. Check the entire exam for balance of coverage.	MB		BDL
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	MB		BDL
a. Author	<u>MARK A. BATES</u> / <u>Mark A. Bates</u>		Date: <u>01/22/2010</u>	
b. Facility Reviewer (*)	<u>N/A</u>		<u>N/A</u>	
c. NRC Chief Examiner (#)	<u>BRUNO CABALLERO</u> / <u>Bruno Caballero</u>		<u>1/22/10</u>	
d. NRC Supervisor	<u>MALCOLM T. WIDMANN</u> / <u>Malcolm T. Widmann</u>		<u>01/22/10</u>	
Note:	# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines			

This ES-201-2 was completed only for the written exam outline. The operating exam outline quality checklist will be completed later.

There are a total of twelve (12) pages in the finalized security agreement. *BM*

page 1 of 4

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 10/7/10 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 11/8/10. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. <u>Kenneth D. White</u>	<u>INSTRUCTOR / EXAM DEVELOPER</u>	<i>Kenneth White</i>	<u>1/21/10</u>	<i>Kenneth White</i>	<u>11/12/10</u>	
2. <u>C.A. FERNANDEZ</u>	<u>INSTR / EXAM DEV</u>	<i>C.A. Fernandez</i>	<u>1/23/10</u>	<i>C.A. Fernandez</i>	<u>11/14/10</u>	
3. <u>Owen B Trivolo</u>	<u>Exam Developer</u>	<i>Owen B Trivolo</i>	<u>2/15/2010</u>	③		
4. <u>TOM WENDELW</u>	<u>SIM ENGR</u>	<i>Tom Wendelw</i>	<u>3/15/10</u>	<i>Tom Wendelw</i>	<u>11/12/10</u>	
5. <u>SEAN BLOOM</u>	<u>UNIT SUPERVISOR</u>	<i>SEAN BLOOM</i>	<u>5/3/10</u>	<i>SEAN BLOOM</i>	<u>11/22/10</u>	
6. <u>Chuck Sizemore</u>	<u>MGR FLEET OPS TRAINING</u>	<i>Chuck Sizemore</i>	<u>5/4/10</u>	②		
7. <u>LARRY RICH</u>	<u>WRITTEN EXAM REVIEW</u>	①	<u>5/27/10</u>			
8. <u>D. SOLOMON</u>	<u>WRITTEN EXAM REVIEW</u>	①	<u>5/27/10</u>			
9. <u>PAUL FARNSWORTH</u>	<u>WRITTEN EXAM REVIEW</u>	①	<u>5/27/10</u>			
10. <u>G.A. LAUGHLIN</u>	<u>Exam Supervisor</u>	<i>G.A. Laughlin</i>	<u>6/9/10</u>	<i>G.A. Laughlin</i>	<u>11/12/10</u>	
11. <u>F.W. Heidecker</u>	<u>Exam Developer</u>	<i>F.W. Heidecker</i>	<u>6/16/10</u>	<i>F.W. Heidecker</i>	<u>11/12/10</u>	
12. <u>GIAN W. BJORR</u>	<u>BOARD SRO</u>	<i>Gian W. Bjorr</i>	<u>6/22/10</u>		<u>11/12/10</u>	
13. <u>DAVID C. DELL</u>	<u>BOARD SRO</u>	<i>David C. Dell</i>	<u>6/29/10</u>	<i>David C. Dell</i>	<u>11/17/10</u>	
14. <u>CHRISTOPHER LAUGHEN</u>	<u>BOARD RO</u>	<i>Christopher Laughen</i>	<u>6/29/10</u>	<i>Christopher Laughen</i>	<u>11/12/10</u>	
15. <u>DAVID C. FUNK</u>	<u>US/SM/SRO</u>	<i>David C. Funk</i>	<u>6/29/10</u>	<i>David C. Funk</i>	<u>11/12/10</u>	

NOTES: ① SEE ATTACHED FOR SIGNATURES. PAGE 1A

② SEE PAGE 1B FOR SIGNATURE

③ SEE PAGE 1C FOR SIGNATURE

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 10/27/10 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of \_\_\_\_\_. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. <u>Kenek D. White</u>	<u>INSTRUCR / EXAM DEVELOPER</u>	<u>[Signature]</u>	<u>1/2/10</u>			
2. <u>C.A. FERNANDEZ</u>	<u>INSTR / EXAM DEV</u>	<u>[Signature]</u>	<u>1/2/10</u>			
3. <u>Owen B. Truslo</u>	<u>Exam Developer</u>	<u>[Signature]</u>	<u>1/2/10</u>			
4. <u>Tom Wendew</u>	<u>SIM ENGR</u>	<u>[Signature]</u>	<u>2/15/2010</u>			
5. <u>SEAN BLOOM</u>	<u>UNIT SUPERVISOR</u>	<u>[Signature]</u>	<u>3/1/10</u>			
6. <u>Chuck Stemsse</u>	<u>UNIT SUPERVISOR</u>	<u>[Signature]</u>	<u>5/13/10</u>			
7. <u>LARRY RICH</u>	<u>MGR FLEET OPS TRAINING</u>	<u>[Signature]</u>	<u>5/1/10</u>			
8. <u>D. J. FERNANDEZ</u>	<u>WRITTEN EXAM REVIEW</u>	<u>[Signature]</u>	<u>5/27/10</u>			
9. <u>Paul Farnsworth</u>	<u>WRITTEN EXAM REVIEW</u>	<u>[Signature]</u>	<u>5/27/10</u>			
10.			<u>5/27/10</u>			
11.						
12.						
13.						
14.						
15.						

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12/7/10 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of \_\_\_\_\_. 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. Kenneth D. White	INSTRUCTOR / EXAM DEVELOPER	<i>[Signature]</i>	1/21/10	<i>[Signature]</i>	1/21/10
2. C.A. FERNANDEZ	INSTR / EXAM DEV	<i>[Signature]</i>	1/21/10	<i>[Signature]</i>	1/21/10
3. Owen B Trislo	Exam Developer	<i>[Signature]</i>	2/15/2010		
4. Tom Wendelin	SIM ENGR	<i>[Signature]</i>	3/15/10		
5. SEAN BLOOM	UNIT SUPERVISOR	<i>[Signature]</i>	5/3/10		
6. Chuck Sizemore	INSTR FLEET OPS TRAINING	<i>[Signature]</i>	5/4/10		
7. LARRY RICH	WRITTEN EXAM REVIEW	<i>[Signature]</i>	5/20/10	<i>[Signature]</i>	11-12-10
8. Paul Farnsworth	WRITTEN EXAM REVIEW	<i>[Signature]</i>	5/20/10	<i>[Signature]</i>	11/20/10
9. G.A. LAUGHLIN	EXAM SUPERVISOR	<i>[Signature]</i>	6/2/10	<i>[Signature]</i>	11/21/10
10. Paul Heidecker	EXAM DEVELOPER	<i>[Signature]</i>	6/10/10	<i>[Signature]</i>	11/21/10
11. GLENDA BEAR	BOARD SRO	<i>[Signature]</i>	6/10/10	<i>[Signature]</i>	11/21/10
12. DAVID C. DELL	BOARD SRO	<i>[Signature]</i>	6/22/10		
13. CHRISTOPHER LOGAN	BOARD SRO	<i>[Signature]</i>	6/29/10		
14. DAVID C. FUNK	US / SM / SRO	<i>[Signature]</i>	6/29/10		

NOTES: ① SEE ATTACHED FOR SIGNATURES.

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page 2A / B 1/10

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 10/7/10 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 11/8/10. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. Kenneth D. White	INSTRUCTOR / EXAM DEVELOPER	<i>Kenneth White</i>	1/21/10	<i>Kenneth White</i>	11/12/10	
2. C.A. FERNANDEZ	INSTR / EXAM DEV	<i>C.A. Fernandez</i>	1/23/10	<i>L. Wood</i>	11/10/10	
3. Owen B Trublo	Exam Developer	<i>Owen B Trublo</i>	2/15/2010			
4. TOM WENDELL	SIM ENGR	<i>Tom Wendell</i>	3/15/10			
5. SEAN BLOOM	UNIT SUPERVISOR	<i>Sean Bloom</i>	5/3/10			
6. Chuck Sizemore	MGR FLEET OPS TRAINING	<i>Chuck Sizemore</i>	5/4/10	<i>Chuck Sizemore</i>	11/12/10	
7. LARRY RICH	WRITTEN EXAM REVIEW	<i>Larry Rich</i>	5/27/10			
8. D. BOREMAN	WRITTEN EXAM REVIEW	<i>D. Boreman</i>	5/27/10			
9. PAUL FARNSWORTH	WRITTEN EXAM REVIEW	<i>Paul Farnsworth</i>	5/27/10			
10. G.A. LAUGHLIN	Exam Supervisor	<i>G.A. Laughlin</i>	6/9/10	<i>G.A. Laughlin</i>	11/12/10	
11. F.W. Heidecker	Exam Developer	<i>F.W. Heidecker</i>	6/16/10	<i>F.W. Heidecker</i>	11/12/10	
12. GLENN W. BIRN	BOARD SRO	<i>Glenn W. Birn</i>	6/22/10			
13. DAVID C. DELL	BOARD SRO	<i>David C. Dell</i>	6/22/10			
14. CHRISTOPHER LAUGHMAN	BOARD RO	<i>Christopher Laughman</i>	6/29/10			
15. DAVID C. FUNK	US / SM / SRO	<i>David C. Funk</i>	6/29/10			

NOTES: ① SEE ATTACHED FOR SIGNATURES.

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. Kenneth D. White	INSTRUCTOR / EXAM DEVELOPER	<i>Kenneth D. White</i>	1/21/10	<i>Kenneth D. White</i>	11/12/10	
2. C.A. FERNANDEZ	INSTR / EXAM DEV	<i>C.A. Fernandez</i>	1/24/10	<i>C.A. Fernandez</i>	11/16/10	
3. Owen B. Truilo	Exam Developer	<i>Owen B. Truilo</i>	2/15/2010	<i>Owen B. Truilo</i>	11/15/2010	
4. TOM WENDELW	SIM ENGR	<i>Tom Wendelw</i>	3/15/10			
5. SEAN BLOOM	UNIT SUPERVISOR	<i>Sean Bloom</i>	5/3/10			
6. Chuck Sizemore	MGR FLEET OPS TRAINING	<i>Chuck Sizemore</i>	5/4/10			
7. LARRY RICH	WRITTEN EXAM REVIEW	⓪	5/27/10			
8. D. SOREMAN	WRITTEN EXAM REVIEW	⓪	5/27/10			
9. PAUL FARNSWORTH	WRITTEN EXAM REVIEW	⓪	5/27/10			
10. G.A. LAUGHLIN	Exam Supervisor	<i>G.A. Laughlin</i>	6/9/10	<i>G.A. Laughlin</i>	11/12/10	
11. E.W. Heidecker	Exam Developer	<i>E.W. Heidecker</i>	6/16/10	<i>E.W. Heidecker</i>	11/12/10	
12. GIAN W. BJOR	BOARD SRO	<i>Gian W. Bjor</i>	6/29/10			
13. DAVID C. DELL	BOARD SRO	<i>David C. Dell</i>	6/29/10			
14. CHRISTOPHER LAUGHIN	BOARD RO	<i>Christopher Laughin</i>	6/29/10			
15. DAVID C. FUNK	US/SM/SRO	<i>David C. Funk</i>	6/29/10			

NOTES: ⓪ SEE ATTACHED FOR SIGNATURES.

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 11/17/10 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 11/8/10. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. David Brooks	Exam Validator/licensed operator	[Signature]	6/27/10	[Signature]	11-12-10
2. ROGER L REED	ILC EXAM VALIDATION	[Signature]	7/12/10	[Signature]	11/15/10
3. RICHARD HOSACIC	ILC EXAM VALIDATION	[Signature]	7/12/10	[Signature]	11/18/10
4. Randy Flynn	ILC EXAM VALIDATION	[Signature]	7/12/10	[Signature]	11/29/10
5. FRANK LEON	SIMULATOR HW	[Signature]	7-12-10	[Signature]	11-12-10
6. Bill Busha	L&C Simulator	[Signature]	7-15-10	[Signature]	11-17-10
7. GEORGE MOYSSIDI	SIMULATOR HARDWARE	[Signature]	7-15-10	[Signature]	11-17-2010
8. KEITH MACKAS	ILC EXAM VALIDATION	[Signature]	7/19/10	[Signature]	11/18/10
9. Paul Reimers	ILC Exam Validation	[Signature]	7-19-10	[Signature]	11-12-10
10. Thomas Wach	ILC Exam Validation	[Signature]	8/5/10	[Signature]	11/12/10
11. JEFF MOELLER	PSL OUTAGE COORD/EXAM VALIDATOR	[Signature]	8/7/10	[Signature]	11/12/10
12. GLEN BYLDE	ILC EXAM VALIDATION	[Signature]	8/7/10	[Signature]	11/25/10
13. Umberto Santini	ILC EXAM VALIDATION	[Signature]	8-9-10	[Signature]	12/6/10
14. Ross Fred	ILC Exam Validation	[Signature]	8/10/10	[Signature]	11/12/10
15. Jay VanHulzen	ILC EXAM VALIDATION	[Signature]	8/9/10	[Signature]	11/12/10

NOTES:

- ① SEE ATTACHED FOR SIGNATURE, PAGE 2A
- ② SEE PAGE 2B FOR SIGNATURE
- ③ SEE PAGE 2C FOR SIGNATURE

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 7/17/10 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of \_\_\_\_\_. 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.	David Brooks	Exam Validator/licensed operator	<i>[Signature]</i>	6/28/10		
2.	ROBERT ZENO	ILC EXAM VALIDATION	<i>[Signature]</i>	7/12/10		
3.	RICHARD MOSACIC	ILC EXAM VALIDATION	<i>[Signature]</i>	7/12/10		
4.	Randy Flynn	ILC EXAM VALIDATION	<i>[Signature]</i>	7/12/10		
5.	FRANK LEON	SIMULATOR HW	<i>[Signature]</i>	7-13-10		
6.	Dill Busha	ILC SIMULATOR	<i>[Signature]</i>	7-15-10		
7.	GEORGE MOYSSIDU	SIMULATOR HARDWARE	<i>[Signature]</i>	7-15-10		
8.	KATHY MOSCIS	ILC EXAM VALIDATION	<i>[Signature]</i>	7/19/10		
9.	Paul Reimers	ILC Exam Validation	<i>[Signature]</i>	7-19-10		
10.	Thomas Wach	ILC Exam Validation	<i>[Signature]</i>	8/6/10		
11.	JEFF MOELLER	PSL OUTAGE COORD/EXAM VALIDATOR	<i>[Signature]</i>	8/11/10		
12.						
13.						
14.						
15.						

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 7/17/10 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 11/8/10. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	David Brookins	Exam Validator/licensed operator	<i>[Signature]</i>	6/27/10		
2.	ROGER REED	ILC Exam Validation	<i>[Signature]</i>	7/12/10		
3.	RICHARD HOSACK	ILC Exam Validation	<i>[Signature]</i>	7/12/10		
4.	Randy Flynn	ILC Exam Validation	<i>[Signature]</i>	7/12/10		
5.	FRANK LEON	SIMULATOR	<i>[Signature]</i>	7-13-10		
6.	BILL BUSH	ILC Exam Validation	<i>[Signature]</i>	7-15-10		
7.	GEORGE MOYSSIDU	SIMULATOR OPERATOR	<i>[Signature]</i>	7-15-10		
8.	KEVIN MOYSSIDU	ILC Exam Validation	<i>[Signature]</i>	7/19/10		
9.	Paul Reimers	ILC Exam Validation	<i>[Signature]</i>	7-19-10		
10.	Thomas Wach	ILC Exam Validation	<i>[Signature]</i>	8/5/10		
11.	JEFF MOELLER	PSL OUTAGE COORDINATOR/EXAM VALIDATOR	<i>[Signature]</i>	8/7/10		
12.	GLEN RYAN	ILC Exam Validation	<i>[Signature]</i>	8/7/10	<i>[Signature]</i>	valid
13.	Harold Seltman	ILC Exam Validation	<i>[Signature]</i>	8-7-10		
14.	Ray Fred	ILC Exam Validation	<i>[Signature]</i>	8/9/10		
15.	Jay VanHusen	ILC Exam Validation	<i>[Signature]</i>	8/9/10		

NOTES:  
① SEE ATTACHED FOR SIGNATURE

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 11/17/10 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 11/18/10. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. David Brookins	Exam Validator/licensed Operator	<i>[Signature]</i>	6/27/10		
2. ROBERT REED	ILC EXAM VALIDATION	<i>[Signature]</i>	7/12/10		
3. RICHARD HOSACK	ILC EXAM VALIDATION	<i>[Signature]</i>	7/12/10		
4. Randy Flynn	ILC EXAM VALIDATION	<i>[Signature]</i>	7/12/10		
5. FRANK LEON	SIMULATOR HW	<i>[Signature]</i>	7-12-10		
6. Bill Busha	ILC Simulator	<i>[Signature]</i>	7-15-10		
7. GEORGE MOYSSIDI	SIMULATOR HARDWARE	<i>[Signature]</i>	7-15-10		
8. KEITH MCGEE	ILC EXAM VALIDATION	<i>[Signature]</i>	7/11/10		
9. Paul Reimers	ILC Exam Validation	<i>[Signature]</i>	7-19-10		
10. Thomas Wach	ILC Exam Validator	<i>[Signature]</i>	8/5/10		
11. JEFF MOELLER	PSL OUTAGE COORD/EXAM VALIDATOR	<i>[Signature]</i>	8/7/10	<i>[Signature]</i>	11/12/10
12. GLEN BLINDE	ILC EXAM VALIDATION	<i>[Signature]</i>	8/7/10		
13. Herbert Jantian	ILC EXAM VALIDATOR	<i>[Signature]</i>	8-7-10		
14. Ross Fred	ILC Exam Validator	<i>[Signature]</i>	8/9/10		
15. Jay VanHulzen	ILC EXAM VALIDATION	<i>[Signature]</i>	8/9/10		

NOTES:

① SEE ATTACHED FOR SIGNATURE

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of \_\_\_\_\_ 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 11/15/10. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. <u>RT HESS</u>	<u>SHIFT MANAGER</u>		<u>8/11/10</u>		<u>11/15/10</u>
2. <u>RT TUCKER</u>	<u>SHIFT MANAGER</u>		<u>8/11/10</u>		<u>11/15/10</u>
3. <u>AD HAWKES</u>	<u>SRO</u>		<u>8-17-10</u>		<u>11-22-10</u>
4. <u>W. BURTONS</u>	<u>Unit Supervisor</u>		<u>8/17/10</u>		<u>11/22/10</u>
5. <u>D. Bell</u>	<u>RCO</u>		<u>8/17/10</u>		<u>11/18/10</u>
6. <u>E. CRETELLA</u>	<u>Plant Tech</u>		<u>8/27/10</u>		<u>11/15/10</u>
7. <u>FLORI MCCAIN</u>	<u>SDC SUPV.</u>		<u>8/30/10</u>		<u>11/15/10</u>
8. <u>Larry Biadel</u>	<u>Instructor</u>		<u>9/23/10</u>		<u>11/12/10</u>
9. <u>D. DRINKARD</u>	<u>RCO</u>		<u>9/23/10</u>		<u>11/15/10</u>
10. <u>C. JOHNSON</u>	<u>VALIDATOR</u>		<u>10/5/10</u>		<u>11/22/10</u>
11. <u>G.C. Richardson</u>	<u>SRO</u>		<u>10/19/10</u>		<u>11/18/10</u>
12. <u>M. Murphy</u>	<u>SRO</u>		<u>11-19-10</u>		<u>11/22/10</u>
13. <u>Vicki McBryde</u>	<u>Admis Spec</u>		<u>10/15/10</u>		<u>11/15/10</u>
14. <u>Jr Myszkiewicz</u>	<u>RO</u>		<u>10/19/10</u>		<u>11/15/10</u>
15. <u>MATT HEW DUKETE</u>	<u>SRO</u>		<u>10/19/10</u>		<u>11/15/10</u>

NOTES:

① See attached page 3A for signature

ES-201

Examination Security Agreement

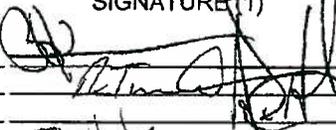
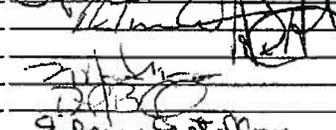
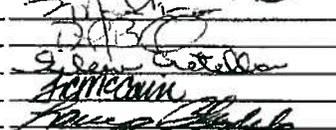
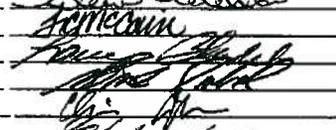
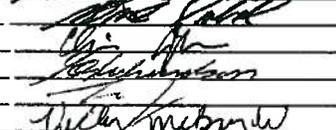
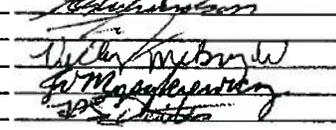
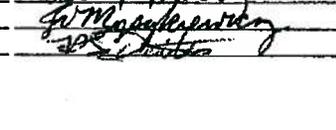
Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of \_\_\_\_\_ 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.	RJ HESS	SHIFT MANAGER		8/11/10		
2.	R. Tucker	SHIFT MANAGER		8/11/10		
3.	AD BARKER	SRO		8/17/10		
4.	W. Wilson	Unit Supervisor		8/17/10		
5.	D. Bell	RCO		8/17/10		
6.	E. CRETELLA	Plant Tech		8/27/10		
7.	FLORI MCCAIN	SOC SUPV.		8/30/10		
8.	Larry Bladel	Instructor		9/23/10	Larry Bladel	4/12/10
9.	D. PRINARD	SRO		9/23/10		
10.	C. JOHNSON	VALIDATOR		10/6/10		
11.	G.C. Richardson	SRO		10/13/10		
12.	M. Murphy	SRO		11/1/10		
13.	Vicki McBrady	Adm. Spec		10/14/10		
14.	J. Myszkewicz	RO		10/19/10		
15.	MATT HEW DUKETE	SRO		10/19/10		11/14/10

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of Oct 25 - Oct 30 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 11/8/10. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	<u>TONY REARER</u>	<u>INSTRUCTOR</u>	<u>[Signature]</u>	<u>10/24/10</u>	<u>[Signature]</u>	<u>11/2/10</u>
2.	<u>Neil Constantine</u>	<u>Trng Manager</u>	<u>[Signature]</u>	<u>10/25/10</u>	<u>[Signature]</u>	<u>11/12/10</u>
3.	<u>TEJ SWIDEN</u>	<u>INSTRUCTOR</u>	<u>[Signature]</u>	<u>10/25/10</u>	<u>[Signature]</u>	<u>11/12/10</u>
4.	<u>JOHN EATON</u>	<u>MENTOR</u>	<u>[Signature]</u>	<u>10/25/10</u>	<u>[Signature]</u>	<u>11/12/10</u>
5.	<u>Rich Wight</u>	<u>Cps Manager</u>	<u>[Signature]</u>	<u>10/25/10</u>	<u>[Signature]</u>	<u>12/8/10</u>
6.	<u>Ed Bertram</u>	<u>Elc Supervisor</u>	<u>[Signature]</u>	<u>10/27/10</u>	<u>[Signature]</u>	<u>11/12/10</u>
7.	<u>MIKE HOUGH</u>	<u>US</u>	<u>[Signature]</u>	<u>10/27/10</u>	<u>[Signature]</u>	<u>11/12/10</u>
8.	<u>Neil Constantine</u>	<u>Trng Manager</u>	<u>[Signature]</u>	<u>11/12/10</u>	<u>[Signature]</u>	<u>max</u>
9.						
10.						
11.						
12.						
13.						
14.						
15.						

NOTES:

Facility: Turkey Point Units 3 &amp; 4

Date of Examination: 10/25/2010

Exam Level: RO

Operating Test Number: 2010-301

Administrative Topic (See Note)	Type Code (See Note)	Describe Activity to be performed
A.1 Conduct of Operations	CR, N	Calculate a Manual VCT Makeup 2.1.25 RO 3.9 SRO 4.2
A.1.a Conduct of Operations	CR,N	Determine Shift Manning Requirements 2.1.5 RO 2.9
A.2 Equipment Control	C, D	Prepare an ECO for 3C Charging Pump. 2.2.13 (4.1/4.3)
A.3 Radiation Control	N/A	N/A
A.4 - Emergency Procedures/Plan	CR, N	Perform a Critical Safety Function Assessment 2.4.21 RO 4.0

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)

Rec'd  
10/13/10

Facility: Turkey Point Units 3 &amp; 4

Date of Examination: 10/25/2010

Exam Level: SRO (U) &amp; (I)

Operating Test Number: 2010-301

Administrative Topic (See Note)	Type Code (See Note)	Describe Activity to be performed
A.1.a Conduct of Operations	CR, N	Determine Shift Manning Requirements 2.1.5 SRO 3.9
A.1.b Conduct of Operations	CR, D	Determine Contingency Actions Required During Reduced Inventory Operations 2.1.2 SRO 4.4.
A.2 Equipment Control	CR, N	Determine Required Action For CCW Test 2.2.12 SRO 4.1
A.3 Radiation Control	CR, N	Determine the Dose rate, Dose Limit, and the number of people to perform the task 2.3.4 SRO 3.1
A.4 - Emergency Procedures/Plan	CR, N	Classify Event and Determine PARS 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 ( $\leq 3$  for ROs,  $\leq 4$  for SROs)  
(N)ew or (M)odified from bank ( $\geq 1$ )  
(P)revious 2 Exams ( $\leq 1$  Randomly selected)

rec'd  
10/13/10

Facility: Turkey Point Date of Examination: 10/25/2010  
 Exam Level: RO  SRO-I  SRO-U  Operating Test No.: 2010-301

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

System / JPM Title	Type Code*	Safety Function
a Respond to a Rod Control Failure APE 001 AA2.05 RO 4.4 SRO 4.6	A, L, M, S	1
b Place Excess Letdown in Service 004 A4.06 RO 3.6 SRO 3.1	A,N,S	2
c Align Safety Injection for Hot Leg Recirc EPE011 EA1.11 RO 4.2 SRO 4.2	L, D,EN,S,P	3
d Respond to loss of RHR APE 025 AA1.03 RO 3.3 SRO 3.3	A, L, D, S	4 P
e Restart Containment Normal Coolers 022 A4.01 RO 3.6 SRO 3.6	N, S	5
f N/A	N/A	N/A
g Place N-42 Power Range Drawer in Service 015 A4.02 RO 3.9 SRO 3.9	M, S	7
h Shutdown Containment Purge 029 A3.01 RO 3.8 SRO 4.0	A, N, S	8

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

i Recover from a Unit 4 EDG Auto Start Failure EPE 055 EA1.02 RO 4.3 SRO 4.4	A, E, M	6
j Control SG Level Locally APE 054 AA1.01 RO 4.5 SRO 4.4	E, D	4S
k Perform Gaseous Radwaste Release (SNPO) 071 A4.26 RO 3.1 SRO 3.9	M, R	9

@ 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
(EN)gineered safety feature	- / - / ≥ 1 (control room system)
(L)ow-Power / Shutdown	
(N)ew or (M)odified from bank including 1(A)	≥ 1 / ≥ 1 / ≥ 1
(P)revious 2 exams	≥ 2 / ≥ 2 / ≥ 1
(R)CA	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(S)imulator	≥ 1 / ≥ 1 / ≥ 1

*Rec'd  
10-13-10*

Facility: <u>Turkey Point</u> Exam Level: RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	Date of Examination: <u>10/25/2010</u> Operating Test No.: <u>2010-301</u>	
Control Room Systems@ (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a Respond to a Rod Control Failure APE 001 AA2.05 RO 4.4 SRO 4.6	A, L, M, S	1
b Place Excess Letdown in Service 004 A4.06 RO 3.6 SRO 3.1	A,N,S	2
c Align Safety Injection for Hot Leg Recirc EPE011 EA1.11 RO 4.2 SRO 4.2	L, D,EN,P,S	3
d Respond to loss of RHR APE 025 AA1.03 RO 3.3 SRO 3.3	A, L, D, S	4 P
e Restart Containment Normal Coolers 022 A4.01 RO 3.6 SRO 3.6	N, S	5
f Restore Off-Site power 062 A4.01 RO 3.3 SRO 3.1	M, S	6
g Place N-42 Power Range Drawer in Service 015 A4.02 RO 3.9 SRO 3.9	M, S	7
h Shutdown Containment Purge 029 A3.01 RO 3.8 SRO 4.0	A, N, S	8
In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i Recover from a Unit 4 EDG Auto Start Failure EPE 055 EA1.02 RO 4.3 SRO 4.4	A, E, M	6
j Control SG Level Locally APE 054 AA1.01 RO 4.5 SRO 4.4	E, D	4S
k Perform Gaseous Radwaste Release (SNPO) 071 A4.26 RO 3.1 SRO 3.9	M, R	9
@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.		
* Type Codes	Criteria for RO / SRO-I / SRO-U	
(A)lternate path	4-6 / 4-6 / 2-3	
(C)ontrol room		
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4	
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1	
(EN)gineered safety feature	- / - / ≥1 (control room system)	
(L)ow-Power / Shutdown		
(N)ew or (M)odified from bank including 1(A)	≥ 1 / ≥ 1 / ≥ 1	
(P)revious 2 exams	≥ 2 / ≥ 2 / ≥ 1	
(R)CA	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)	
(S)imulator	≥ 1 / ≥ 1 / ≥ 1	

Rec'd  
10/13/10

Facility: <u>Turkey Point</u> Exam Level: RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input checked="" type="checkbox"/>	Date of Examination: <u>10/25/2010</u> Operating Test No.: <u>2010-301</u>	
Control Room Systems@ (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a N/A	N/A	N/A
b N/A	N/A	N/A
c. Align Safety Injection for Hot Leg Recirc	L,D,EN,P,S	3
d Respond to loss of RHR APE 025 AA1.03 RO 3.3 SRO 3.3	A, L, D, S	4 P
e. N/A	N	5
f. N/A	N/A	N/A
G N/A	N/A	N/A
h. Shutdown Containment Purge 029 A3.01 RO 3.8 SRO 4.0	A, N, S	8
In-Plant Systems® (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
e Recover from a Unit 4 EDG Auto Start Failure EPE 055 EA1.02 RO 4.3 SRO 4.4	A, E, M	6
f N/A	N/A	N/A
g Perform Gaseous Radwaste Release (SNPO) 071 A4.26 RO 3.1 SRO 3.9	M, R	9
@ 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	
(EN)gineered safety feature	- / - / ≥ 1 (control room system)	
(L)ow-Power / Shutdown		
(N)ew or (M)odified from bank including 1(A)	≥ 1 / ≥ 1 / ≥ 1	
(P)revious 2 exams	≥ 2 / ≥ 2 / ≥ 1	
(R)CA	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)	
(S)imulator	≥ 1 / ≥ 1 / ≥ 1	

Facility: Turkey Point 3 & 4		Date of Examination: 10/25/2010		Operating Test Number: 2010-301	
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).	ML	\$	BN	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	ML	\$	BN	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	ML	\$	BN	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	ML	\$	BN	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	ML	\$	BN	
2. Walk-Through Criteria		--	--	--	
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> <li>• initial conditions</li> <li>• initiating cues</li> <li>• references and tools, including associated procedures</li> <li>• reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee</li> <li>• operationally important specific performance criteria that include:                         <ul style="list-style-type: none"> <li>- detailed expected actions with exact criteria and nomenclature</li> <li>- system response and other examiner cues</li> <li>- statements describing important observations to be made by the applicant</li> <li>- criteria for successful completion of the task</li> <li>- identification of critical steps and their associated performance standards</li> <li>- restrictions on the sequence of steps, if applicable</li> </ul> </li> </ul>	ML	\$	BN	
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.	ML	\$	BN	
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.		ML	\$	BN	
	Printed Name / Signature	Date			
a.	Author	GREGORY LAUGHLIN / <i>Greg Laughlin</i>		10/12/10	
b.	Facility Reviewer(*)	SEAN BLOOM / <i>SEAN BLOOM</i>		10/12/10	
c.	NRC Chief Examiner (#)	BRUNO CABALLERO / <i>B. Caballero</i>		10-22-10	
d.	NRC Supervisor	Edwin Lee, Jr. / <i>Edwin Lee, Jr.</i>		10/22/2010 for M.W.	
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

*Rec'd  
10/13/10*

Facility: Turkey Point 3 & 4      Date of Examination: 10/25/2010      Operating Test Number: 2010-301      Scenario: 1				
QUALITATIVE ATTRIBUTES		Initials		
		a	b*	c#
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	JS	SB	BN
2.	The scenarios consist mostly of related events.	JS	SB	BN
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	JS	SB	BN
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.	JS	SB	BN
5.	The events are valid with regard to physics and thermodynamics.	JS	SB	BN
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	JS	SB	BN
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.	JS	SB	BN
8.	The simulator modeling is not altered.	JS	SB	BN
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.	JS	SB	BN
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.	JS	SB	BN
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	JS	SB	BN
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).	JS	SB	BN
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	JS	SB	BN
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		
1.	Total malfunctions (5-8)	7	JS	BN
2.	Malfunctions after EOP entry (1-2)	2	JS	BN
3.	Abnormal events (2-4)	5	JS	BN
4.	Major transients (1-2)	1	JS	BN
5.	EOPs entered/requiring substantive actions (1-2)	1	JS	BN
6.	EOP contingencies requiring substantive actions (0-2)	1	JS	BN
7.	Critical tasks (2-3)	2	JS	BN

Rec'd  
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Facility: Turkey Point 3 & 4      Date of Examination: 10/25/2010      Operating Test Number: 2010-301      Scenario: 2					
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.	SA	SB	BN	
2.	The scenarios consist mostly of related events.	SA	SB	BN	
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	SA	SB	BN	
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.	SA	SB	BN	
5.	The events are valid with regard to physics and thermodynamics.	SA	SB	BN	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	SA	SB	BN	
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.	SA	SB	BN	
8.	The simulator modeling is not altered.	SA	SB	BN	
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.	SA	SB	BN	
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.	SA	SB	BN	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	SA	SB	BN	
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).	SA	SB	BN	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	SA	SB	BN	
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--	
1.	Total malfunctions (5-8)	6	SA	SB	BN
2.	Malfunctions after EOP entry (1-2)	2	SA	SB	BN
3.	Abnormal events (2-4)	3	SA	SB	BN
4.	Major transients (1-2)	1	SA	SB	BN
5.	EOPs entered/requiring substantive actions (1-2)	3	SA	SB	BN
6.	EOP contingencies requiring substantive actions (0-2)	0	SA	SB	BN
7.	Critical tasks (2-3)	2	SA	SB	BN

Rec'd  
10-22-10

Facility: Turkey Point 3 & 4      Date of Examination: 10/25/2010      Operating Test Number: 2010-301      Scenario: 4					
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.	BT	SB	BA	
2.	The scenarios consist mostly of related events.	BT	SB	BA	
3.	Each event description consists of <ul style="list-style-type: none"> <li>• the point in the scenario when it is to be initiated</li> <li>• the malfunction(s) that are entered to initiate the event</li> <li>• the symptoms/cues that will be visible to the crew</li> <li>• the expected operator actions (by shift position)</li> <li>• the event termination point (if applicable)</li> </ul>	BT	SB	BA	
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.	BT	SB	BA	
5.	The events are valid with regard to physics and thermodynamics.	BT	SB	BA	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	BT	SB	BA	
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.	BT	SB	BA	
8.	The simulator modeling is not altered.	BT	SB	BA	
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.	BT	SB	BA	
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.	BT	SB	BA	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	BT	SB	BA	
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).	BT	SB	BA	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	BT	SB	BA	
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--	
1:	Total malfunctions (5-8)	7	BT	SB	BA
2:	Malfunctions after EOP entry (1-2)	2	BT	SB	BA
3:	Abnormal events (2-4)	5	BT	SB	BA
4:	Major transients (1-2)	1	BT	SB	BA
5:	EOPs entered/requiring substantive actions (1-2)	1	BT	SB	BA
6:	EOP contingencies requiring substantive actions (0-2)	0	BT	SB	BA
7:	Critical tasks (2-3)	2	BT	SB	BA

*BT*  
10-22-10

Facility: Turkey Point 3 & 4		Date of Examination: 10/25/2010		Operating Test Number: 2010-301		Scenario: 6	
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.	SA	SB	PML			
2.	The scenarios consist mostly of related events.	SA	SB	PML			
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	SA	SB	PML			
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.	SA	SB	PML			
5.	The events are valid with regard to physics and thermodynamics.	SA	SB	PML			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	SA	SB	PML			
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.	SA	SB	PML			
8.	The simulator modeling is not altered.	SA	SB	PML			
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.	SA	SB	PML			
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.	SA	SB	PML			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	SA	SB	PML			
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).	SA	SB	PML			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position:	SA	SB	PML			
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--	--	--	
1.	Total malfunctions (5-8)	6	SA	SB	PML		
2.	Malfunctions after EOP entry (1-2)	2	SA	SB	PML		
3.	Abnormal events (2-4)	2	SA	SB	PML		
4.	Major transients (1-2)	1	SA	SB	PML		
5.	EOPs entered/requiring substantive actions (1-2)	2	SA	SB	PML		
6.	EOP contingencies requiring substantive actions (0-2)	1	SA	SB	PML		
7.	Critical tasks (2-3)	2	SA	SB	PML		

Rec'd  
10-22-10

Facility: Turkey Point Units 3 & 4		Date of Exam: 10/25/2010		Operating Test No.: 2010-301														
A P P L I C A N T	E V E N T  T Y P E	Scenarios												T O T A L	M I N I M U M (*)  R   I   U			
		4			6			1										
		CREW POSITION			CREW POSITION			CREW POSITION										
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P								
RO <input type="checkbox"/>	RX							6							1	1	1	0
	NOR	5			1										2	1	1	1
SRO-I Trent	I/C	2,3,4			2,4,5			2,5							8	4	4	2
	MAJ	7			6			7							3	2	2	1
SRO-U <input type="checkbox"/>	TS	1,4			1,2,4										5	0	2	2
	RX		5												1	1	1	0
SRO-I Strusinski	NOR				1										1	1	1	1
	I/C		2,4		2,4,5										5	4	4	2
SRO-U <input type="checkbox"/>	MAJ		7		6										2	2	2	1
	TS				1,2,4										3	0	2	2
RO Frater	RX							6							1	1	1	0
	NOR			5			3								2	1	1	1
SRO-I <input type="checkbox"/>	I/C			3,4,7a			1,4,5,6a	2,5							9	4	4	2
SRO-U <input type="checkbox"/>	MAJ			7			6	7							3	2	2	1
	TS														0	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.

Rec'd  
10/27/10

Facility: Turkey Point Units 3 & 4		Date of Exam: 10/25/2010		Operating Test No.: 2010-301															
A P P L I C A N T	E V E N T  T Y P E	Scenarios												T O T A L	M I N I M U M (*)				
		4			6			1											
		CREW POSITION			CREW POSITION			CREW POSITION											
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P									
<input type="checkbox"/> RO	RX							6								1	1	1	0
	NOR	5			1											2	1	1	1
SRO-I Rutgerson	I/C	2, 3, 4			2,4, 5			2,5								8	4	4	2
<input type="checkbox"/> SRO-U	MAJ	7			6			7								3	2	2	1
	TS	1, 4			1,2, 4											5	0	2	2
<input type="checkbox"/> RO Lamb	RX		5													1	1	1	0
	NOR					3		6								2	1	1	1
<input type="checkbox"/> SRO-I	I/C		2,4			1,4, 5,6a		3,4, 7								9	4	4	2
<input type="checkbox"/> SRO-U	MAJ		7			6		7								3	2	2	1
	TS															0	0	2	2
<input type="checkbox"/> RO Moore	RX				3											1	1	1	0
	NOR			5												1	1	1	1
<input type="checkbox"/> SRO-I	I/C			3,4, 7a	1,2											5	4	4	2
<input type="checkbox"/> SRO-U	MAJ			7	6											2	2	2	1
	TS															0	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.

Rec'd  
10/22/10

Facility: Turkey Point Units 3 & 4      Date of Exam: 10/25/2010      Operating Test No.: 2010-301

A P P L I C A N T	E V E N T  T Y P E	Scenarios												T O T A L	M I N I M U M (*)						
		4			6			1													
		CREW POSITION			CREW POSITION			CREW POSITION													
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P											
<input type="checkbox"/> RO	RX					3												1	1	1	0
	NOR											6						1	1	1	1
SRO-I Vasquez	I/C	2, 3, 4				1,2						3,4, 7						8	4	4	2
<input type="checkbox"/> SRO-U	MAJ	7				6						7						3	2	2	1
	TS	1, 4																2	0	2	2
<input type="checkbox"/> RO	RX		5															1	1	1	0
	NOR						1	4										2	1	1	1
SRO-I Morris	I/C		2,4				3,4, 5,6a	2,3, 5										9	4	4	2
<input type="checkbox"/> SRO-U	MAJ		7				6	7										3	2	2	1
	TS							1,3										2	0	2	2
<input type="checkbox"/> RO McGowan	RX					3												1	1	1	0
	NOR			5								6						2	1	1	1
<input type="checkbox"/> SRO-I	I/C			3,4, 7a		1,2						3,4, 7						8	4	4	2
<input type="checkbox"/> SRO-U	MAJ			7		6						7						3	2	2	1
	TS																	0	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.

Rec'd  
10/22/10

Facility: Turkey Point Units 3 & 4			Date of Exam: 10/25/2010			Operating Test No.: 2010-301															
A P P L I C A N T	E V E N T  T Y P E	Scenarios												T O T A L	M I N I M U M (*)						
		4			6			1													
		CREW POSITION			CREW POSITION			CREW POSITION													
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P											
RO <input type="checkbox"/>	RX																	0	1	1	0
SRO-I <input type="checkbox"/>	NOR							4										1	1	1	1
	I/C							2,3, 5										3	4	4	2
SRO-U	MAJ							7										1	2	2	1
Sablone	TS							1,3										2	0	2	2
RO <input type="checkbox"/>	RX																		1	1	0
SRO-I <input type="checkbox"/>	NOR																		1	1	1
SRO-U <input type="checkbox"/>	I/C																		4	4	2
	MAJ																		2	2	1
	TS																		0	2	2
RO <input type="checkbox"/>	RX																		1	1	0
SRO-I <input type="checkbox"/>	NOR																		1	1	1
SRO-U <input type="checkbox"/>	I/C																		4	4	2
	MAJ																		2	2	1
	TS																		0	2	2

Instructions:

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

Rec'd  
10/22/10

Facility: *TURKEY POINT* Date of Examination: *10/25/10* Operating Test No.: *2010-301*  
*3/4*

Competencies	APPLICANTS															
	ATC				BOP											
	RO				RO				RO				RO			
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>									
SCENARIO				SCENARIO				SCENARIO				SCENARIO				
(1)	2	3	4	(1)	2	3	4	(1)	2	3	4	(1)	2	3	4	
Interpret/Diagnose Events and Conditions	2,5				3 4 7				2 3 5				2 3 5			
Comply With and Use Procedures (1)	2,5 6,7				3,4 6,7				2,3 4,5 7				2,3 4,5 7			
Operate Control Boards (2)	2,5 6,7				3,4 6,7				-				-			
Communicate and Interact	ALL				ALL				ALL				ALL			
Demonstrate Supervisory Ability (3)	-				-				ALL				ALL			
Comply With and Use Tech. Specs. (3)	-				-				1 3				1 3			

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

Instructions:

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

*Rec'd 10/15/10*

Facility: **TURKEY POINT** Date of Examination: **10/25/10** Operating Test No.: **2010-301**  
**3/4**

Competencies	APPLICANTS															
	ATC				BOP				RO				RO			
	RO <input checked="" type="checkbox"/>				RO <input checked="" type="checkbox"/>				RO <input type="checkbox"/>				RO <input type="checkbox"/>			
	SRO-I <input type="checkbox"/>				SRO-I <input type="checkbox"/>				SRO-I <input checked="" type="checkbox"/>				SRO-I <input type="checkbox"/>			
SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input checked="" type="checkbox"/>				
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		1,3				2 5a				1,3 2,1				1,2 3		
Comply With and Use Procedures (1)		1,3 4,6				2,4 5a,5				4,1 3,5				1,3 4,5		
Operate Control Boards (2)		1,3 4,6				2,4 5a,5				-				-		
Communicate and Interact		ALL				ALL				ALL				ALL		
Demonstrate Supervisory Ability (3)		-				-				ALL				ALL		
Comply With and Use Tech. Specs. (3)		-				-				2,4				2,4		

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.

*Rec'd 10/13/10*

Facility: **TURKEY POINT** Date of Examination: **10/25/10** Operating Test No.: **2010-301**  
**3/4**

Competencies	APPLICANTS															
	ATC				BOP				RO				RO			
	RO <input checked="" type="checkbox"/>				RO <input checked="" type="checkbox"/>				RO <input type="checkbox"/>				RO <input type="checkbox"/>			
	SRO-I <input type="checkbox"/>				SRO-I <input type="checkbox"/>				SRO-I <input checked="" type="checkbox"/>				SRO-I <input type="checkbox"/>			
SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input checked="" type="checkbox"/>				
SCENARIO				SCENARIO				SCENARIO				SCENARIO				
1 2 <b>(4)</b> 4				1 2 <b>(4)</b> 4				1 2 <b>(4)</b> 4				1 2 <b>(4)</b> 4				
Interpret/Diagnose Events and Conditions			2,4 7				3,4 7a				2,3 4,7				3,4 7a	
Comply With and Use Procedures (1)			2,4 5,7				3,4 5,7a				3,4 5,7				3,4 5,7a	
Operate Control Boards (2)			2,4 5,7				3,4 5,7a				—				—	
Communicate and Interact			ALL				ALL				ALL				ALL	
Demonstrate Supervisory Ability (3)			—				—				ALL				ALL	
Comply With and Use Tech. Specs. (3)			—				—				1,4				1,4	

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.

*Handwritten:* **10/25/10**



FINAL MARKUP w/ List of Rejected K/As

ES-401, Rev. 9

PWR Examination Outline

Form ES-401-2

Facility: *Turkey Point* Date of Exam: *November 2010*

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	1	2	1	N/A			1	2	N/A			2	9	2	2	4
	Tier Totals	4	5	4	N/A			4	5	N/A			5	27	5	5	10
2. Plant Systems	1	3	3	1	2	3	3	3	3	2	3	2	28	3	2	5	
	2	1	1	1	1	1	1	1	1	0	1	1	10	2	1	3	
	Tier Totals	4	4	2	3	4	4	4	4	2	4	3	38	5	3	8	
3. Generic Knowledge and Abilities Categories				1	2	3	4	10					1	2	3	4	7
				3	3	2	2						1	2	2	2	

- 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).
- 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  $\pm 1$  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.
- 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 section D.1.b of ES-401 for guidance regarding the elimination of inappropriate K/A statements.
- 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.
- 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.
- Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
- \*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. Refer to section D.1.b of ES-401 for the applicable KAs.
- 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.
- 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..

ES-401		PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO/SRO)							Form ES-401-2	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#	
000007 (BW/E02&E10; CE/E02) Reactor Trip - Stabilization - Recovery / 1										
000008 Pressurizer Vapor Space Accident / 3						R	008AG2.4.35	3.8		
000009 Small Break LOCA / 3										
000011 Large Break LOCA / 3						R	011EG2.2.36	3.1		
000015/17 RCP Malfunctions / 4										
000022 Loss of Rx Coolant Makeup / 2	R						022AK1.03	3.0		
000025 Loss of RHR System / 4						R	025AG2.4.49	4.6		
000026 Loss of Component Cooling Water / 8			R				026AK3.01 (REJECTED)	3.2		
000027 Pressurizer Pressure Control System Malfunction / 3		R					027AK2.03	2.6		
000029 ATWS / 1					R		029EA2.07	4.2		
000038 Steam Gen. Tube Rupture / 3					R		038EA2.13	3.1		
000040 (BW/E05; CE/E05, <u>W/E12</u> ) Steam Line Rupture - Excessive Heat Transfer / 4			R				WE12EK3.4	3.5		
000054 (CE/E06) Loss of Main Feedwater / 4				R			054AA1.03	3.5		
000055 Station Blackout / 6	R						055EK1.01	3.3		
000056 Loss of Off-site Power / 6				R			056AA1.18	3.2		
000057 Loss of Vital AC Inst. Bus / 6					R		057AA2.04	3.7		
000058 Loss of DC Power / 6	R						058AK1.01	2.8		
000062 Loss of Nuclear Svc Water / 4										
000065 Loss of Instrument Air / 8										
WE04 LOCA Outside Containment / 3		R					WE04EK2.1	3.5		
WE11 Loss of Emergency Coolant Recirc. / 4			R				WE11EK3.3	3.8		
BW/E04; <u>W/E05</u> Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4		R					WE05EK2.2	3.9		
000077 Generator Voltage and Electric Grid Disturbances / 6				R			000077AA1.03	3.8		
K/A Category Totals:	3	3	3	3	3	3	Group Point Total:	18.6		

T1G1 PWR EXAMINATION OUTLINE

KA NAME / SAFETY FUNCTION: IR K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G TOPIC:

RO	SRO	3.8	4.0	3.1	4.2	3	3.4	4.6	4.4	3.2	3.5	2.6	2.8	4.2	4.3	3.1	3.7	3.5	3.7	3.3	3.7	3.2	3.2	
008AG2.4.35	Pressurizer Vapor Space Accident / 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects					
011EG2.2.36	Large Break LOCA / 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions of operations					
022AK1.03	Loss of Rx Coolant Makeup / 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Relationship between charging flow and PZR level																			
025AG2.4.49	Loss of RHR System / 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.					
026AK3-01	Loss of Component Cooling Water / 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<del>The conditions that will initiate the automatic opening and closing of the SWS isolation valves to the CGWS coolers.</del>					
027AK2.03	Pressurizer Pressure Control System Malfunction / 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	REJECTED and replaced w/ 026AK3.01 <sub>3</sub> Controllers and positioners					
029EA2.07	ATWS / 1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor trip breaker indicating lights					
038EA2.13	Steam Gen. Tube Rupture / 3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Magnitude of rupture					
054AA1.03	Loss of Main Feedwater / 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	AFW auxiliaries, including oil cooling water supply					
055EK1.01	Station Blackout / 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effect of battery discharge rates on capacity					
056AA1.18	Loss of Off-site Power / 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Control room normal ventilation supply fan					

T1G1 PWR EXAMINATION OUTLINE

KA NAME / SAFETY FUNCTION: IR K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G TOPIC:

	RO	SRO	
057AA2.04	3.7	4	ESF system panel alarm annunciators and channel status indicators
058AK1.01	2.8	3.1	Battery charger equipment and instrumentation
077AA1.03	3.8	3.7	Voltage regulator controls
WE04EK2.1	3.5	3.9	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features. *
WE05EK2.2	3.9	4.2	Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems and relations between the proper operation of these systems to the operation of the facility. *
WE11EK3.3	3.8	3.8	Manipulation of controls required to obtain desired operating results during abnormal and emergency situations.
WE12EK3.4	3.5	3.8	RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facilities license and amendments are not violated.

ES-401		PWR Examination Outline						Form ES-401-2	
		Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO / SRO)							
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
000001 Continuous Rod Withdrawal / 1		R					001AK2.08	3.1	
000003 Dropped Control Rod / 1					R		003AA2.02	2.7	
000005 Inoperable/Stuck Control Rod / 1									
000024 Emergency Boration / 1		R					024AK2.04	2.6	
000028 Pressurizer Level Malfunction / 2									
000032 Loss of Source Range NI / 7									
000033 Loss of Intermediate Range NI / 7									
000036 (BW/A08) Fuel Handling Accident / 8									
000037 Steam Generator Tube Leak / 3									
000051 Loss of Condenser Vacuum / 4						R	051AG2.4.46	4.2	
000059 Accidental Liquid RadWaste Rel. / 9									
000060 Accidental Gaseous Radwaste Rel. / 9	R						060AK1.04	2.5	
000061 ARM System Alarms / 7									
000067 Plant Fire On-site / 8									
000068 (BW/A06) Control Room Evac. / 8									
000069 (WE14) Loss of CTMT Integrity / 5									
000074 (WE06&E07) Inad. Core Cooling / 4									
000076 High Reactor Coolant Activity / 9									
WE01 & E02 Rediagnosis & SI Termination / 3				R			WE01EA1.2	3.3	
WE13 Steam Generator Over-pressure / 4									
WE15 Containment Flooding / 5						R	WE15EG2.4.30	2.7	
WE16 High Containment Radiation / 9				R			WE16EA2.2	3.0	
BW/A01 Plant Runback / 1									
BW/A02&A03 Loss of NNI-X/Y / 7									
BW/A04 Turbine Trip / 4									
BW/A05 Emergency Diesel Actuation / 6									
BW/A07 Flooding / 8									
BW/E03 Inadequate Subcooling Margin / 4									
BW/E08; W/E03 LOCA Cooldown - Depress. / 4									
BW/E09; CE/A13; W/E09&E10 Natural Circ. / 4			R				WE10EK3.4	3.4	
BW/E13&E14 EOP Rules and Enclosures									
CE/A11; W/E08 RCS Overcooling - PTS / 4									
CE/A16 Excess RCS Leakage / 2									
CE/E09 Functional Recovery									
K/A Category Point Totals:	1	2	1	1	2	2	Group Point Total:		

T1G2 PWR EXAMINATION OUTLINE

KA NAME / SAFETY FUNCTION: IR K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G TOPIC:

	RO	SRO	
001AK2.08	3.1	3	Individual rod display lights and indications
003AA2.02	2.7	2.8	Signal inputs to rod control system
024AK2.04	2.6	2.5	Pumps
051AG2.4.46	4.2	4.2	Ability to verify that the alarms are consistent with the plant conditions.
060AK1.04	2.5	3.7	Calculation of offsite doses due to a release from the power plant
WE01EA1.2	3.3	3.6	Operating behavior characteristics of the facility.
WE10EK3.4	3.4	3.7	RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facilities license and amendments are not violated.
we15EG2.4.30	2.7	4.1	Knowledge of events related to system operations/status that must be reported to internal organizations or outside agencies.
WE16EA2.2	3.0	3.3	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.

ES-401		PWR Examination Outline Plant Systems - Tier 2/Group 1 (RO/SRO)												Form ES-401-2	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#	
003 Reactor Coolant Pump		R										003 K2.02 rejected	2.5		
004 Chemical and Volume Control			R									004 K3.07	3.8		
005 Residual Heat Removal				R	R							005 K4.06, 005 K5.09	2.7	3.2	
006 Emergency Core Cooling						R						006 K6.10	2.6		
007 Pressurizer Relief/Quench Tank										R		007 A4.01	2.7		
008 Component Cooling Water								R	R			008 A3.04, 008 A4.07	2.9/ 2.9		
010 Pressurizer Pressure Control				R								010 K5.02	2.6		
012 Reactor Protection										R		012 G2.2.25	3.2		
013 Engineered Safety Features Actuation					R					R		013 G2.4.46, 013 K6.01	4.2/ 2.7		
022 Containment Cooling			R									022 K4.04	2.8		
025 Ice Condenser															
026 Containment Spray		R				R						REJECTED 026 A1.05 026 K2.02	3.1/ 2.7		
039 Main and Reheat Steam							R					039 A2.05	3.3		
059 Main Feedwater							R					059 A2.01, 059 A2.11	3.4/ 3.0		
061 Auxiliary/Emergency Feedwater	R											061 K1.05	2.6		
062 AC Electrical Distribution						R						062 A1.03	2.5		
063 DC Electrical Distribution	R											063 K1.02	2.7		
064 Emergency Diesel Generator	R				R							064 K1.03, 064 K6.08 rejected	3.4/ 3.2		
073 Process Radiation Monitoring				R								073 K5.01	2.5		
076 Service Water		R								R		076 A4.04, 076 K2.04	3.5/ 2.9		
078 Instrument Air								R				078 A3.01	3.1		
103 Containment						R						103 A1.01	3.7		
K/A Category Point Totals: 3 3 1 2 3 3 3 2 3 2															
Group Point Total:												28/5			



T2G1 PWR EXAMINATION OUTLINE

KA NAME / SAFETY FUNCTION: IR K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G TOPIC:

	RO	SRO	
013K6.01	2.7	3.1	Engineered Safety Features Actuation Sensors and detectors
022K4.04	2.8	3.1	Containment Cooling Cooling of control rod drive motors
026A1.05	3.1	3.4	Containment Spray Chemical additive tank level and concentration
026K2.02	2.7	2.9	Containment Spray MOV's
039A2.05	3.3	3.6	Main and Reheat Steam Increasing steam demand, its relationship to increases in reactor power
059A2.01	3.4	3.6	Main Feedwater Feedwater actuation of AFW system
059A2.11	3.0	3.3	Main Feedwater Failure of feedwater control system
061K1.05	2.6	2.8	Auxiliary/Emergency Feedwater Condensate system
062A1.03	2.5	2.8	AC Electrical Distribution Effect on instrumentation and controls of switching power supplies
063K1.02	2.7	3.2	DC Electrical Distribution AC electrical system
064K1.03	3.6	4.0	Emergency Diesel Generator Diesel fuel oil supply system

*replaced w/ 103 A3.01*

*For example, at Turkey Point NaOH added to CMIT sump, where sump equiv to "tank"*

*Replaced w/ 064 K6.07*

T2G1 PWR EXAMINATION OUTLINE

KA NAME / SAFETY FUNCTION: IR K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G TOPIC:

	RO	SRO
064K6.08	3.2	3.3

Emergency Diesel Generator

Fuel oil storage tanks

073K5.01	2.5	3.0	Radiation theory, including sources, types, units and effects
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Process Radiation Monitoring

076A4.04	3.5	3.5	Emergency heat loads
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Service Water

076K2.04	2.5	2.6	Reactor building closed cooling water
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Service Water

078A3.01	3.1	3.2	Air pressure
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Instrument Air

103A1.01	3.7	4.1	Containment pressure, temperature and humidity
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Containment

ES-401		PWR Examination Outline Plant Systems - Tier 2/Group 2 (RO/ SRO)											Form ES-401-2	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
001 Control Rod Drive			R									001K3.02	3.4	
002 Reactor Coolant														
011 Pressurizer Level Control														
014 Rod Position Indication														
015 Nuclear Instrumentation														
016 Non-nuclear Instrumentation														
017 In-core Temperature Monitor														
027 Containment Iodine Removal														
028 Hydrogen Recombiner and Purge Control		R										028K2.01 (REJECTED)	2.5	
029 Containment Purge														
033 Spent Fuel Pool Cooling			R									033K4.04	2.7	
034 Fuel Handling Equipment														
035 Steam Generator														
041 Steam Dump/Turbine Bypass Control										R		041G2.2.42	3.9	
045 Main Turbine Generator				R								045K5.18	2.7	
055 Condenser Air Removal														
056 Condensate								R				056A2.04	2.6	
068 Liquid Radwaste					R							068K6.10	2.5	
071 Waste Gas Disposal														
072 Area Radiation Monitoring						R						072A1.01	3.4	
075 Circulating Water														
079 Station Air	R											079K1.01	3.0	
086 Fire Protection									R			086A4.01	3.3	
K/A Category Point Totals:	1	1	1	1	1	1	1	1	1	0	1		Group Point Total:	



ES-401		PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO / <u>SRO</u> )							Form ES-401-2	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#	
000007 (BW/E02&E10; CE/E02) Reactor Trip - Stabilization - Recovery / 1						S	007 EG 2.4.34	4.1		
000008 Pressurizer Vapor Space Accident / 3						S	008 AG 2.4.18	4.0		
000009 Small Break LOCA / 3										
000011 Large Break LOCA / 3										
000015/17 RCP Malfunctions / 4										
000022 Loss of Rx Coolant Makeup / 2										
000025 Loss of RHR System / 4										
000026 Loss of Component Cooling Water / 8										
000027 Pressurizer Pressure Control System Malfunction / 3						S	<u>027 AG 2.4.49</u> REJECTED	4.4		
000029 ATWS / 1										
000038 Steam Gen. Tube Rupture / 3										
000040 (BW/E05; CE/E05; W/E12) Steam Line Rupture - Excessive Heat Transfer / 4										
000054 (CE/E06) Loss of Main Feedwater / 4										
000055 Station Blackout / 6										
000056 Loss of Off-site Power / 6					S		056 AA 2.43	4.1		
000057 Loss of Vital AC Inst. Bus / 6										
000058 Loss of DC Power / 6										
000062 Loss of Nuclear Svc Water / 4					S		062 AA 2.05	2.5		
000065 Loss of Instrument Air / 8					S		<u>065 AA 2.01</u> REJECTED	3.2		
W/E04 LOCA Outside Containment / 3										
W/E11 Loss of Emergency Coolant Recirc. / 4										
BW/E04; W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4										
000077 Generator Voltage and Electric Grid Disturbances / 6										
K/A Category Totals:				3	3		Group Point Total:		18/6	

KA NAME / SAFETY FUNCTION: IR K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G TOPIC:

RO SRO

007EG2.4.34 Reactor Trip - Stabilization - Recovery / 1 4.2 4.1                     Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects

008AG2.4.18 Pressurizer Vapor Space Accident / 3 3.3 4.0                      Knowledge of the specific bases for EOPs.

027AG2.4.49 Pressurizer Pressure Control System Malfunction / 3 4.6 4.4                      Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.  
*Replaced w/ 027 AG 2, 4, 45*

056AA2.43 Loss of Off-site Power / 6 3.9 4.1                       Occurrence of a turbine trip

062AA2.05 Loss of Nuclear Svc Water / 4 2.4 2.5                       The normal values for SWS-header flow rate and the flow rates to the components cooled by the SWS

065AA2.01 Loss of Instrument Air / 8 2.9 3.2                       Cause and effect of low-pressure instrument air alarm  
*Replaced w/ 040 (w/ E12) EA 2.1*

ES-401	PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO / (SRO))							Form ES-401-2	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
000001 Continuous Rod Withdrawal / 1									
000003 Dropped Control Rod / 1									
000005 Inoperable/Stuck Control Rod / 1									
000024 Emergency Boration / 1						S	024AG2.1.32	4.0	
000028 Pressurizer Level Malfunction / 2									
000032 Loss of Source Range NI / 7						S	032AG2.4.31	4.1	
000033 Loss of Intermediate Range NI / 7						S	033AA2.06	2.8	
000036 (BW/A08) Fuel Handling Accident / 8									
000037 Steam Generator Tube Leak / 3									
000051 Loss of Condenser Vacuum / 4						S	051AA2.02	4.1	
000059 Accidental Liquid RadWaste Rel. / 9									
000060 Accidental Gaseous Radwaste Rel. / 9									
000061 ARM System Alarms / 7									
000067 Plant Fire On-site / 8									
000068 (BW/A06) Control Room Evac. / 8									
000069 (W/E14) Loss of CTMT Integrity / 5									
000074 (W/E06&E07) Inad. Core Cooling / 4									
000076 High Reactor Coolant Activity / 9									
W/E01 & E02 Rediagnosis & SI Termination / 3									
W/E13 Steam Generator Over-pressure / 4									
W/E15 Containment Flooding / 5									
W/E16 High Containment Radiation / 9									
BW/A01 Plant Runback / 1									
BW/A02&A03 Loss of NNI-X/Y / 7									
BW/A04 Turbine Trip / 4									
BW/A05 Emergency Diesel Actuation / 6									
BW/A07 Flooding / 8									
BW/E03 Inadequate Subcooling Margin / 4									
BW/E08; W/E03 LOCA Cooldown - Depress. / 4									
BW/E09; CE/A13; W/E09&E10 Natural Circ. / 4									
BW/E13&E14 EOP Rules and Enclosures									
CE/A11; W/E08 RCS Overcooling - PTS / 4									
CE/A16 Excess RCS Leakage / 2									
CE/E09 Functional Recovery									
K/A Category Point Totals:				2	2		Group Point Total:		9/4

SRO T1G2 PWR EXAMINATION OUTLINE

KA NAME / SAFETY FUNCTION: IR K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G TOPIC:

RO SRO

024AG2.1.32	Emergency Boration / 1	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to explain and apply all system limits and precautions.					
032AG2.4.31	Loss of Source Range NI / 7	4.2	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of annunciators alarms, indications or response procedures					
033AA2.06	Loss of Intermediate Range NI / 7	2.3	2.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cause of failure of an intermediate-range channel				
051AA2.02	Loss of Condenser Vacuum / 4	3.9	4.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conditions requiring reactor and/or turbine trip				

ES-401		PWR Examination Outline Plant Systems - Tier 2/Group 1 (RO/SRO)											Form ES-401-2	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
003 Reactor Coolant Pump														
004 Chemical and Volume Control														
005 Residual Heat Removal														
006 Emergency Core Cooling														
007 Pressurizer Relief/Quench Tank								S				007A2.03 (REJECTED)	3.9	
008 Component Cooling Water								S				008A2.08	2.7	
010 Pressurizer Pressure Control											S	010G2.2.40	4.7	
012 Reactor Protection														
013 Engineered Safety Features Actuation														
022 Containment Cooling														
025 Ice Condenser														
026 Containment Spray											S	026G2.4.47	4.2	
039 Main and Reheat Steam														
059 Main Feedwater														
061 Auxiliary/Emergency Feedwater														
062 AC Electrical Distribution														
063 DC Electrical Distribution														
064 Emergency Diesel Generator														
073 Process Radiation Monitoring								S				073A2.02	3.2	
076 Service Water														
078 Instrument Air														
103 Containment														
K/A Category Point Totals:								3			2	Group Point Total:		28/5







Facility: Turkey Point		Date of Exam: November 2010		RD + SRD			
Category	K/A #	Topic	RO		SRO-Only		
			IR	#	IR	#	
1. Conduct of Operations	RD	2.1.1	Knowledge of conduct of Ops req'ts (RD)		3.8		
	RD	2.1.18	Ability to make accurate, clear logs, records, etc.		3.6		
	RD	2.1.23	Perform specific sys/integ pft proc's all modes		4.3		
		2.1.					
	SRD	2.1.38	Station req'ts for verbal communication (SRD)				3.8
		2.1.					
		Subtotal		(3)		(1)	
2. Equipment Control	RD	2.2.3	Differences between units: design, proc's, operation		3.8		
	RD	2.2.42	System parameters entry conditions Tech Specs		3.9		
	RD	2.2.43	Process to track inoperable alarms		3.0		
		2.2.					
	SRD	2.2.1	Pre-startup proc's, including proc's for reactivity				4.4
	SRD	2.2.17	Managing Maint. activities during pur ops.				3.8
		Subtotal		(3)		(2)	
3. Radiation Control	RD	2.3.4	Rad exposure limits during normal/emerg		3.2		
	RD	2.3.7	Comply w/ RWP during normal/abnormal		3.5		
		2.3.					
	SRD	2.3.12	Rad safety principles pertaining to LD duties				3.7
	SRD	2.3.14	Rad/Contam hazards during n/a/ or emerg				3.8
	2.3.						
		Subtotal		(2)		(2)	
4. Emergency Procedures / Plan	RD	2.4.11	ADPs		4.0		
	RD	2.4.13	Crew Roles/Resp during EOP usage		4.0		
		2.4.					
		2.4.					
	SRD	2.4.32	Operator response to loss of all annunciators				4.0
	SRD	2.4.4	Abnormal indications for parameters entry ADP/EOP				4.7
		Subtotal		(2)		(2)	
Tier 3 Point Total				10	10	7	7



SRO T3 PWR EXAMINATION OUTLINE

KA NAME / SAFETY FUNCTION: IR K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G TOPIC:

RO SRO

G2.1.38	Conduct of operations	3.7	3.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the stations requirements for verbal communication when implementing procedures						
G2.2.1	Equipment Control	4.5	4.4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to perform pre-startup procedures for the facility, including operating those controls associated with plant equipment that could affect reactivity. *						
G2.2.17	Equipment Control	2.6	3.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the process for managing maintenance activities during power operations.						
G2.3.12	Radiation Control	3.2	3.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiological safety principles pertaining to licensed operator duties						
G2.3.14	Radiation Control	3.4	3.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities						
G2.4.32	Emergency Procedures/Plans	3.6	4.0	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of operator response to loss of all annunciators.						
G2.4.4	Emergency Procedures/Plans	4.5	4.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.						

Turkey Point November 2010 Initial Exam

ES-401

Record of Rejected K/As

Form ES-401-4

Tier / Group	Randomly Selected K/A	Reason for Rejection
RO 1/1	026 AK3.01	The only automatic service water valves associated with the CCW system are the intake cooling water valves POV-3/4-4882 & - 4883 located in the outside turbine building. These valves only isolate non-essential loads following an SI (which in essence provides <i>more</i> cooling to the CCW heat exchangers). These valves fail closed and have accumulators to hold valves open following a loss of air. Chief Examiner randomly re-selected 026 AK3.03
RO 2/2	028 K2.01	Turkey Point does not have hydrogen recombiners; therefore, K/A does not match for power supply. Chief Examiner randomly re-selected 028 K3.01
RO 2/1	064 K6.08	This K/A (fuel oil storage tank) overlapped too much with 064 K1.03 (fuel oil supply system). (5-11-10) Chief Examiner randomly re-selected 064 K6.07
RO 2/1	003 K2.02	This K/A (power supply to CCW pump in RCP category) overlapped too much with 076 K2.04 (power supply to CCW pumps). (5-11-10) Chief Examiner randomly re-selected 003 K2.01
RO 2/2	028 K3.01	(08/19/10) Licensee could not write a question for the K/A because there are no procedures for purge control due to high H2. Turkey Point received an exemption (December 2001) from the H2 control requirements of 10CFR50.44 and Appendix A GDC 41, 42, and 43 because the large dry containment can withstand effects of hydrogen combustion w/o hydrogen control.  Nevertheless, Turkey Point does have post accident hydrogen analyzers; therefore, Chief Examiner selected 028 A4.03 based on task listing in the K/A Catalog for 028.
SRO 1/1	027 AG2.4.49	(09/09/10) Licensee could not write an SRO question for this K/A because immediate operator actions are RO knowledge. Additionally, the knowledge of tech spec bases cannot be tied to the wording of the K/A because it's associated with the determination of whether or not the 1 hour action statement applies. In other words, "1 hour" does not qualify as "immediate." Chief Examiner replaced with 027 AG2.4.45
SRO 1/1	065 AA2.01	(09/09/10) Licensee could not write an SRO question for this K/A because "determining and interpreting the cause – effect of the low pressure instrument air alarm" does not lend itself to Tech Specs and the wording of the K/A does not lend itself to any of the 7 topics listed in 10CFR55.43. Chief Examiner replaced with 040 (W/E12) EA2.1
RO 2/1	026 A1.05	(10/5/10) At Turkey Point, auto operation of the Containment Spray System introduces boric acid (from the RWST) into the containment. In order to hit the K/A, the Chief Examiner suggested that the licensee write a question to test applicants' ability to predict and/or monitor the tank level and concentration; however, the licensee was concerned that this was minutia. Chief Examiner randomly re-selected 103 A3.01
SRO 2/1	007 A2.03	(10/5/10) The licensee was unable to write a question dealing with the PRT at the SRO level. The proposed question (in the ES-401-9 comments) was not good enough because the normal operating procedure always has the detailed steps for adjusting PRT parameters, i.e., more than one correct answer. Chief Examiner randomly re-selected 004 A2.19.

Facility: <b>TURKEY POINT</b>		Date of Exam: <b>11/2010</b>		Exam Level: RO <input checked="" type="checkbox"/>	SRO <input checked="" type="checkbox"/>	
Item Description	Initial					
	a	b*	c#			
1. Questions and answers are technically accurate and applicable to the facility.	JA	CB	BAU			
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	JA	CB	BAU			
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	JA	CB	BAU			
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).			BAU			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: ___ the audit exam was systematically and randomly developed; or ___ the audit exam was completed before the license exam was started; or ___ the examinations were developed independently; or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or ___ other (explain)	JA	CB	BAU			
6. Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank	Modified	New	JA	CB	BAU
	23/4	8/1	44/20			
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	CIA		JA	CB	BAU
	3/1/6	44/19				
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	JA	CB	BAU			
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.	JA	CB	BAU			
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	JA	CB	BAU			
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.	JA	CB	BAU			
		Printed Name / Signature		Date		
a. Author	<u>GREGORY LAUGHLIN / G. Laughe</u>		<u>11/4/10</u>			
b. Facility Reviewer (*)	<u>SEAN BLOOM / S. Bloom</u>		<u>11/4/10</u>			
c. NRC Chief Examiner (#)	<u>BRUNO CABALLERO / B. Caballero</u>		<u>11/5/10</u>			
d. NRC Regional Supervisor	<u>MALCOLM T. WIDJANA / M. Widjana</u>		<u>11/8/10</u>			
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.						

Rec'd  
11/5/10



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. Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of ES-401 Section D.2.f.
7. 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?
8. 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. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
1	H	2	x										x		N	E S	<p>008 AG2.4.35</p> <p>1. Q=K/A: The 1<sup>st</sup> part of the proposed question tests the applicants' knowledge of <u>which</u> auxiliary operator will be directed to reset the breaker. The K/A requires testing the applicants' knowledge of <u>the task</u> that the auxiliary operator will perform. Knowing which aux operator will be directed is indirectly testing the applicants' knowledge of the location of MCC 4C; however, there may be a better way to test the applicants' knowledge of <u>the task</u> that the aux operator will perform.</p> <p>How will the operator reset the breaker? What are the control room indications when the Block Valve breaker trips? Is the tripped indication different for a breaker trip on thermals vs magnetics? Once the auxiliary operator resets the tripped breaker (either by depressing a local thermal reset pushbutton OR by taking the breaker switch beyond the OFF position and then to the ON position) what will the control room indications be? These may be additional opportunities to test the applicants' knowledge of the task that the auxiliary operator will be directed to perform.</p> <p>Alternatively, there is an opportunity in ES-1.2, Step 3 to verify Pzr B/U Group Heater Lockouts reset in the Unit 4 North Electrical Penetration Room&gt; this is an opportunity to test the applicants' knowledge of how to reset these lockouts, including what the control room indications will be once they're reset. The K/A part of Pzr Vapor Space Accident can still be hit by first testing the applicants' knowledge of the stuck open PORV strategy, and then testing the applicants' knowledge of the aux operator task during the post LOCA cool down and depressurization.</p> <p>2. Stem Focus: The sequence of events listed in the bullets should be streamlined, i.e, did the reactor trip occur due to the loss of offsite power? Is the loss of offsite power necessary? Are hot leg temperatures necessary?</p> <p>3. Licensee revised question to test applicants' knowledge of how to locally reset a thermal overload and the effect on Pzr level if the MOV cannot be closed. Question is SAT</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
2	F	5						x					x		N	E S	<p>011 EG2.2.36</p> <p>Examiner Note: It may not be possible to prepare a psychometrically sound question for this K/A because the Tier 1 Large Break LOCA topic has nothing to do with analyzing LCOs for maintenance of power sources. [<i>Large Break LOCA – Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions of operations.</i>]</p> <p><u>Replace the K/A with the Chief Examiner</u></p> <ol style="list-style-type: none"> <li>Job-link and/or LOD = 5: Testing the RO's knowledge of the FSAR design basis of the ECCS flow may be grounds for an appeal.</li> <li>Q=K/A: The intent of the Tier 1 LOCA category is not being met by testing the applicants' knowledge of LCO 3.5.2 and the FSAR basis for ECCS flowrate</li> <li>Licensee stated that the RO knowledge being tested is how a clearance on the Unit 3 Safety Injection pump will affect the LCO on Unit 4 and that the resulting effect on Unit 3 is derived from the purpose and function of the SI system, which tests the applicants' knowledge of a large break LOCA. Question is SAT.</li> </ol>
3	H	2				x		x							N	E S	<p>022 AK1.03</p> <ol style="list-style-type: none"> <li>Job-link: According to ONOP-47.1, Loss of Charging in Modes 1-4, Step 6, when charging cannot be re-established, the crew is required to isolate RCP Seal Return AND letdown (MOV-4-6386). The 3<sup>rd</sup> and 4<sup>th</sup> bullets in the stem state that total RCP seal return is 9 gpm and that the crew has isolated letdown. If the crew has isolated letdown, then they also wouldn't they have also isolated RCP seal return? Discuss how this is operationally valid w/ licensee.</li> <li>Cred Dist: 10 or 11 minutes seems excessively long (Choices "C" and "D"). Suggest testing the applicants' knowledge of how long it will take for pressurizer level to lower by some value greater than 1%. What is readability of pressurizer level instrument? Can the crew see 1% on the scale? Suggest 2 or 3% and change answer.</li> <li>Licensee stated that the 11 minute value is plausible based on the relief valve (from CVCS) that discharges to the PRT. The system is designed to allow seal return to the PRT via the relief valve. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only				
4	H	3	x			x			x						B	E S	025 AG2.4.49 1. Job-link: Is the premise of the question that the RCS is in solid operations or a bubble? The distracter analysis stated that the override pushbutton operates with the OMS < 525 psig when the RCS is solid. The 1 <sup>st</sup> bullet states that the RCS has a bubble in the Pzr. Is it possible to get the momentary pressure excursion with the bubble? Should the 1 <sup>st</sup> bullet state that the RCS is solid? The distracter analysis stated that "auto-closure is not defeated until Mode 5." Ask licensee to explain these items. 2. Cred Dist: The plausibility of "C" and "D" depends on solid operations. The stem states there is a bubble. 3. Stem Focus: The stem should state the initial value of RCS pressure. 4. Stem Focus: Change the wording of "A" to only say "Depress the Interrupt Pushbutton for MOV-4-750 and -751 <u>before</u> the valves reach their full close position." 5. Stem Focus: Change the wording of "B" to say "Depress the Interrupt Pushbutton for MOV-750 and -751 <u>immediately after</u> the valves have both fully closed." 6. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
5	H	2	x			x								B	U S	026 AK3.03 1. Cred Dist: The "reason" provided in "B" and "C" (max charging flow is required) is not plausible because the break is on the secondary side and no pressurizer level is provided in the stem. 2. Stem Focus: Need to understand the progression of how E-1, Attachment 4 (Establish Charging Flow) is being used by the crew. E-0 trips the RCPs and goes to E-2 (Faulted SG) for a main steam line break inside containment. Doesn't seem to arrive in E-1. 3. Stem Focus: The stem question does not elicit the 1 <sup>st</sup> part of each choice, i.e., the stem question only asks for the reason (2 <sup>nd</sup> part of each choice.) 4. Stem Focus: The 2 <sup>nd</sup> part of each choice can be streamlined as follows: A. Initiation of cold seal injection flow will cause RCP seal damage. B. Maximum charging flow to the RCS loops is required. 5. Stem Focus: Re-word the stem question to ask for the reason why "the local seal injection valves are required to be manually closed before starting the charging pump in accordance with BD-ONOP-041.1, Reactor Coolant Pump Off-Normal Basis Document." 6. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
6	H	2	x			x								N	E S	027 AK2.03 1. Cred Dist: IF the applicant incorrectly assumes that PT 445 is the controller input, THEN the controller output would initially be at 42.5% and then rise to compensate for the PORV opening. Therefore, change "C" and "D" to say "Greater than 42.5%" since this is still equivalent to 100%. 2. Stem Focus: Re-word the stem question to say "WOOTF completes both statements after the channel failure?" 3. Stem Focus: Re-word the 1 <sup>st</sup> fill-in-the-blank statement as follows: The control signal (% controller output) indication on Pressurizer Pressure Controller PC-3-444J will be _____. 4. Licensee reworded question to ask applicants to predict the final state of the controller and effect on plant. Comments incorporated. Question is SAT.
7	H	2	x				x							B	E S	029 EA2.07 1. Partial: An applicant can also argue "B" as correct because the loss of 3P07 indirectly caused the loss of reactor trip breaker indications. 2. Stem Focus: the 4 <sup>th</sup> bullet includes two "vague" items: 1) breaker lights are "out" and 2) "on the console." Need to avoid the use of slang and be more precise as to the console panel identification number. 3. Stem Focus: Re-word the stem question to say "WOOTF explains these breaker light indications and identifies the status of the reactor trip breakers." 4. Licensee incorporated comments. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
8	F					x						x			N	U S	<p>038 EA2.13</p> <p>Note to Examiner: This question overlaps with Scenario 5, Event 6.</p> <ol style="list-style-type: none"> <li>Cred Dist: "C" and "D" are not plausible because if <u>ONE</u> of these two choices were actually correct, THEN the other choice must also be correct. (The stem question on asks for the "magnitude" of the leak and since both choices are 200 gpm, it doesn't matter "who" discovers or whether primary-to-secondary vs RCS leak rate) Since the applicant knows there is ONLY one correct answer, he/she can use this logic to eliminate these two choices.</li> <li>Backwards Logic: The foldout page criteria assumes that the reactor has not yet been tripped and requires a manual trip AND manual safety injection IF any 1 of the 2 listed conditions are met. The decision whether or not to manually initiate a SI is made <u>before the reactor trip is initiated</u>. In the proposed test item, the crew has manually tripped the reactor and the applicants' knowledge of plant conditions that require a subsequent manual safety injection <u>after the reactor trip has been initiated</u>. This is backwards logic.</li> </ol> <p>Re-work the question to test the applicants' knowledge of when a manual reactor trip and manual safety injection is required. Alternatively, write a new question to test the RO applicants' ability to use the R-15 Primary to Secondary Leak Rate Graph in the Plant Curve Book (Section 5, Figure 15).</p> <ol style="list-style-type: none"> <li>Licensee changed "C" to be completely different than "D." Question is SAT.</li> </ol>
9	F	2				x									N	U S	<p>054 AA1.03</p> <ol style="list-style-type: none"> <li>Cred Dist: "B" and "D" are not plausible because Operations does not have normal or abnormal operating procedures that utilize service water to cool the AFW Pump lube oil. The backup water supply to the AFW lube oil coolers is directed ONLY in accordance with approved maintenance procedures.</li> </ol> <p>Suggest testing the applicants' knowledge associated with another aspect of the AFW lube oil system when it's running following a loss of MFW, e.g., an alarm procedure for high lube oil temperature (does one exist?)</p> <ol style="list-style-type: none"> <li>Licensee changed out question. New question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
10	F	2					x							B	E S	<p>055 EK1.01</p> <p>1. Partial: "B" is also correct in accordance with BD-EOP-ECA-0.0, page 46 since the non-essential loads aren't required to be stripped until 1 hour has elapsed. In other words, "B" is correct in the sense that the battery can carry BOTH essential AND non-essential loads for the first hour.</p> <p>Suggest the following:</p> <p><i>WOOTF completes the following statement in accordance with BD-EOP-ECA-0.0, Loss of All AC Power Basis Document?</i></p> <p><i>The 3A, 4A, and Spare Batteries can supply their shutdown loads for _____ when they are initially at 80% capacity, provided that the non-essential DC loads are de-energized within the first _____ of a loss of all AC power event.</i></p> <p>A. 1 hour; 15 minutes                      B. 1 hour; 30 minutes                      C. 2 hours; 30 minutes                      D. 2 hours; 60 minutes</p> <p>2. Comments incorporated. Question is SAT.</p>
11	H	2	x					x						N	E S	<p>056 AA1.18</p> <p>Note to Examiner: At Turkey Point the air handling unit "A" (E-16A), "B" (E-16B), and "C" (E-16C), located in the mechanical equipment room. There are also three air conditioning units (E-17A, E-17B, and E-17C) located on the roof of the control building, that have refrigerant lines in each of the air handling units. The air conditioning units receive power from a vital MCC and these MCCs can be supplied though the emergency electrical power system following a loss of power.</p> <p>1. Job-link: Verify w/ the licensee that E-16A, B, and C have the same vital power supply that E-17A, B, and C do.</p> <p>2. Stem Focus: The word "should" is subject to interpretation and cannot be used on the exam.</p> <p>3. Stem Focus: The word "quickest" is subject to interpretation and cannot be used on the exam.</p> <p>4. Licensee incorporated comments. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
12	F	2												M	S	057 AA2.04 1. Ask the licensee how the plant response is different between a loss of 3PO7 (Scenario 4, Event 4) and a loss of 3PO8 (this test item). Ensure no overlap. 2. This is a different power supply panel than Scenario 4. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
13	H	2	x					x				x			N	E S	<p>058 AK1.01</p> <ol style="list-style-type: none"> <li>Ask the licensee to explain Figure 1 in SD 144, i.e., the line representing DC Bus 3B (and 3D23 and 3D23A) is crooked. Are 3D23 and 3D23A normally connected to each other? Can they be disconnected from each other? What does the crooked line represent?</li> <li>Job-link: The stem of the question didn't specify how the Vital DC Bus 3D23 lost power. Since MCC 3B was already out of service, then the remaining power supplies to this bus are the 3B battery and the 3B2 charger. Did either of these power supplies also fail? If so, then the question may not work. Ask the licensee to explain the indications that are available in the control room that would indicate that the Vital DC Bus 3D23 had lost power even though the 3B battery and 3B2 Battery Charger were still available.</li> <li>Stem Focus: The 4<sup>th</sup> bullet is not necessary</li> <li>Stem Focus: The 3<sup>rd</sup> and 5<sup>th</sup> bullets need to make sense with respect to comment #2 listed above.</li> <li>Backward: The stem question first asks for "the battery charger which is available", which may cause an applicant to eliminate "A" and "C" because of the 2<sup>nd</sup> part of these choices. In other words, what does the 1<sup>st</sup> part of the question have to do with energizing the bus? Because the ONOP 3.5 requires using the battery itself to energize the bus, the first part of the question seems irrelevant.</li> </ol> <p>Suggest re-wording the stem question and choices as follows:</p> <p><i>WOOTF identifies the battery charger that is still available and the required methodology for re-energizing Vital DC Bus 3D23 in accordance with 3-ONOP-003.5?</i></p> <ol style="list-style-type: none"> <li><b>3B2; the ONOP requires energizing the bus by FIRST closing the battery output breaker and THEN aligning the charger</b></li> <li><i>Etc.</i></li> <li><i>Etc.</i></li> <li><i>Etc.</i></li> </ol> <p>6. Licensee incorporated comments. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
14	H	2	x											B	E S	077 AA1.03 1. Stem Focus: Provide the exact range of MVAR oscillations 2. Stem Focus: Provide the exact value of stable MW(e) 3. Stem Focus: Provide the status of the red Power System Stabilizer Light (illuminated) 4. Stem Focus: Each of the choices needs to include the exact switch ID# and noun name as labeled on the control board. 5. Stem Focus: Each of the choices needs to be re-worded to say "place the AC [noun name ID#] switch to the raise position" 6. Stem Focus: The DC switch is called "adjuster" in the ONOP-090. Ensure that this noun name and ID# is included in "B" and "D." Also, for these two choices, include a phrase saying that the operator is required to place the voltage regulator in "TEST" and place the DC Adjuster to the "raise" ("lower") position. 7. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
15	H	2				x								N	U S	WE04 EK2.1 1. "A" and "C" are not plausible because: 1) the stem states that the crew has closed MOV-3-744A & B and the wording of the 2 <sup>nd</sup> fill-in-the-blank statement refers to "normal" RHR and 2) the wording of the 1 <sup>st</sup> fill-in-the-blank statement tells the applicant that the leak has indeed been isolated. The combination of these two things make returning to NORMAL RHR operator (for future plant cool down) not plausible. IF "alternate" RHR is the basis for plausibility, THEN provide the procedure that uses this terminology.  2. "C" and "D" are not plausible because the <i>immediate</i> confirmatory indications of whether a leak has been isolated will not involve waiting on a decreasing radiation level. For example, one plausible immediate indication that a leak is isolated is pressurizer level. RCS pressure is an immediate indicator, PZR level is an immediate indicator; however, Aux Bldg radiation is a gradual indicator and would not be used by the procedure as the sole indication that the leak had been isolated.  3. Licensee stated that radiation is the entry condition to the procedure; therefore, it was plausible. Re-worded the question to test the availability of "alternate" RHR given the location of a leak. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
16	F	2	x			x								N	E S	<p>WE05 EK2.2</p> <ol style="list-style-type: none"> <li>Cred Dist: "D" is not plausible because IF condensate is not successful, THEN normal feedwater will never be successful.</li> <li>Stem Focus: Instead of listing AFW as the first system to be attempted (in the stem), suggest re-wording as follows:  <i>The Unit 3 crew has entered 3-EOP-FR-H.1, Response to Loss of Secondary Heat Sink. The crew has been unsuccessful in restoring AFW flow to the Steam Generators.</i>  <i>WOOTF reflects the order of the steps listed in 3-EOP-FR-H.1 for systems that the crew must attempt to use to reestablish flow to the Steam Generators?</i></li> <li>Licensee stated that it was possible that after resetting an SI signal, RCS pressure could conceivably get back up high enough so that condensate would not be available and the feedwater system could be used. Other comments incorporated. Question is SAT.</li> </ol>
17	H	2	x				x							N	E S	<p>WE11 EK3.3</p> <ol style="list-style-type: none"> <li>Partial: "C" can also be successfully argued as correct because Step 3.m of ECA-1.1 states to adjust primary water and boric acid flow controllers to achieve a 1.5 to 1 blend <u>while providing maximum makeup</u>. Furthermore, BD-EOP-ECA-1.1 states that the basis for adding makeup to the RWST as necessary is to <u>extend the time</u> that the SI pumps and Containment Spray can take a suction from the RWST and provide cooling to the RCS. Even though the 2<sup>nd</sup> part of the stem statement specifically asks for the reason for the "flow rates", this is not precise enough to preclude an applicant from successfully arguing that the "flow rates" are necessary to prevent losing the HHSI pumps.</li> <li>Stem Focus: The stem question needs to include the phrase "in accordance with..."</li> <li>Stem Focus: The 2<sup>nd</sup> part of "B" and "D" needs to be worded exactly as the basis document is worded, i.e., "provides a blend of about 2000 gpm."</li> <li>Licensee reworded "A" and "C." Comments incorporated. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
18	H	2											x		B	U S	<p>WE12 EK3.4</p> <ol style="list-style-type: none"> <li>Q=K/A: The test item must test the RO applicants' knowledge of the <u>reasons</u> for an crew action listed in ECA-2.1. The proposed test item only tests the RO applicants' knowledge of what ECA-2.1 requires (which is fine) but doesn't also test the applicants' knowledge of the reason why ECA-2.1 requires an alternate FW supply equal to 25 gpm per S/G.</li> <li>Stem Focus: The stem question and choices should be reworded as follows:   <i>WOOTF identifies the required BOP operator actions to control Steam Generator Levels in accordance with 4-EOP-ECA-2.1?</i>   <i>The BOP operator is required to ...</i> <ol style="list-style-type: none"> <li><i>Isolate AFW and establish an alternate....</i></li> <li><i>Isolate AFW and establish an alternate.....</i></li> <li><i>Continue to use AFW flow equal to ...</i></li> <li><i>Continue to use AFW flow equal to....</i></li> </ol> </li> <li>Comments incorporated. Question is SAT.</li> </ol>
19	F	2											x		N	U S	<p>001 AK2.08</p> <p>Note to Examiner: This K/A (although different) may overlap too much with the K/A in Question #20 (K/A 003 AA2.02). Ensure test items are different or pick another K/A if too difficult to make each question unique.</p> <ol style="list-style-type: none"> <li>Q=K/A: The Tier 1 K/A is associated with Generic <u>Abnormal</u> Plant Evolutions. The proposed test item tests the applicants' knowledge of the Tier 2 <u>NORMAL</u> differences between the console rod position indications vs the digital control system rod position indications. (See System 001 K4.01, K6.13). How is the proposed test item any different than when control rods are normally being continuously withdrawn? The question should also test the applicants' knowledge of some aspect of the continuous rod withdrawal event/procedure in conjunction with individual rod display lights and indications.</li> <li>Licensee included required actions for a continuous rod withdrawal from ONOP-028. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
20	H	2	x											N	E S	003 AA2.02  1. Stem Focus: Ensure each of the four choices are grammatically worded in the form of a "reason." In other words, the stem question asks the applicants' to identify the cause of the annunciator but each of the choices isn't a "cause." The annunciator procedure lists the cause as a regulation or phase failure in the power cabinet.  2. Licensee added a fill-in-the-blank statement to incorporate comments. Question is SAT.
21	H	2	x											M	E S	024 AK2.04  1. Cred Dist: "A" and "B" are not plausible because the MOV-4-350 flow path can never be used without the boric acid tank pumps. (Is there any time when this flow path is still used in a procedure when the pumps cannot be started?)  2. Stem Focus: The 2 <sup>nd</sup> bullet should include the procedure name/number that the crew is implementing.  <i>WOOTF identifies the next required action to commence emergency boration in accordance with FR-S.1?</i>  A. <i>Open MOV-4-350, Emergency Borate Valve.</i> B. <i>Close the LCV-4-115C, [noun name] and locally open the breaker.</i> C. <i>Start an additional charging pump</i> D. <i>Locally open Manual Emergency Boration Valve, 4-356.</i>  3. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
22	H	2	x								x			N	E S	051 AG2.4.46 1. Backward: The 1 <sup>st</sup> portion of each choice requires the applicants' to look back in time to see if they think the Steam Dump Armed annunciator malfunctioned when it initially alarmed at 26 "Hg. Afterwards, the 2 <sup>nd</sup> portion of each choice requires the applicants to predict whether the Lo Vacuum Trip annunciator will alarm when the vacuum further diminishes to 24 "Hg. This makes the question very disjointed. 2. Stem Focus: Provide an initial power level and/or value of MW(e). 3. Licensee re-worded stem question to ask the applicants to predict. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
23	F	3				x								N	U S	<p>060 AK1.04</p> <p>Note to Examiner: Based on LP3202004, Radiological Assessment – PARs, the RO applicants at Turkey Point are required to know the purpose of offsite dose calculations and the function of primary and backup environmental monitoring equipment and their use. At Turkey Point the HP/Chemistry Group is responsible for performing off-site dose calculations.</p> <p>However, since this K/A is associated with an accidental gaseous radwaste release it is conducive to writing a test item associated with the a Waste Gas Decay Tank release because the operators are <i>involved</i> with an offsite release permit calculation (i.e., setting up the R-14 monitor using the Gas Release Permit information) and must be knowledgeable of <i>when</i> the release is required to be immediately terminated.</p> <p>1. Cred Dist: "A" and "B" are not plausible because offsite county agencies are not responsible to perform offsite dose calculations since they lack the expertise and this is not standard protocol in the nuclear industry.</p> <p>Suggest the following:</p> <p><i>The control room operator is preparing to commence a release of Waste Decay Tank "A."</i></p> <p><i>WOOTF identifies:</i></p> <p>1) <i>how the operator is required to adjust the R-14 HIGH ALARM thumbwheel and</i></p> <p>2) <i>When the release is required to be terminated in accordance with 0-NOP-061.14A, Waste Gas Disposal System Controlled Release of Gas Decay Tank A?</i></p> <p>A. <i>Adjust the thumbwheel to match the "Max expected monitor reading" listed on the Gas Decay Tank Release Permit. Terminate the release if at any time during the release the Aux Building Fan configuration changes</i></p> <p>B. <i>Adjust the thumbwheel to match the "R-14 set point" specified on the Gas Decay Tank Release Permit</i>  <i>Terminate the release if ...[another plausible distracter here]</i></p> <p>2. Comments incorporated. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
24	H	2											x		B N	U S	<p>WE01 EA1.2</p> <p>1. Q=K/A: The proposed test item tests the applicants' knowledge of how to discern between an excessive steam demand event versus a loss of reactor coolant event by knowing what parameter is different (i.e., reactivity). The K/A requires testing the applicants' ability to use ES-0.0, Rediagnosis, by analyzing the parameters listed in this procedure to determine the correct contingency or alternate procedure. The proposed test item does not present any of the same parameters that ES-0.0 uses and does not require the applicant to choose a correct procedure with which to proceed, which is the purpose of Rediagnosis.</p> <p>2. Licensee replaced question. New question is SAT.</p>
25	F	2	x					x							B	E S	<p>WE10 EK3.4</p> <p>1. Job-link: Is the actual reason why the crew is directed to check pressurizer level greater than 68% <u>so that pressurizer level can be maintained on scale</u> when the void in the vessel head relocates to the pressurizer (after pump is started)? The Basis document states the reason is to accommodate upper head void collapse. Need to obtain the RCP TRIP/RESTART section of the generic issues section of the ERG Executive Volume (EOP Setpoint D.10) to ensure that the wording of the "reason" prevents an applicant from successfully arguing that there is no correct answer.</p> <p>2. Stem Focus: Change the 2<sup>nd</sup> bullet to "The crew is trying to start the 4B RCP at Step 5"</p> <p>3. Stem Focus: Re-word the stem question as follows:</p> <p><i>In accordance with 4-EOP-ES-0.4, WOOTF identifies the required pressurizer level and the basis for the required level in accordance with BD-EOP-ES-0.4, Basis Document?</i></p> <p>A. Between 20 and 25%; [wrong reason]                      B. Between 20 and 25%; to maintain pressurizer level on scale when the reactor upper head void collapses                      C. Less than 68%; [wrong reason]                      D. Greater than 68%; to maintain pressurizer level on scale when the reactor upper head void collapses</p> <p>4. Comments incorporated. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
26	F	2				x				x				N	E S	<p>WE15 EG2.4.30</p> <ol style="list-style-type: none"> <li>#/units: Provide the word "recirculation" each time the phrase "containment sump" is used in the question, i.e., containment recirculation sump.</li> <li>Cred Dist: An applicant could (successfully) eliminate "A" and "B" choices without knowing the set point. Because the 1<sup>st</sup> fill-in-the-blank statement does not include the word "first entered", an applicant who does not know the setpoint could deduce that IF the setpoint was 427, THEN 446 would also be the safer guess and wouldn't necessarily be wrong. Suggest the following wording and note the values used:   <i>WOOTF identifies the minimum Containment Recirculation Sump level which requires the crew to enter 3-EOP-FR-Z.2 (Response to Containment Flooding) and "who" the crew is required to provide sump level and activity level values to?</i> <ol style="list-style-type: none"> <li>428 inches; Technical Support Center</li> <li>428 inches; Nuclear Chemistry</li> <li><b>447 inches; Technical Support Center</b></li> <li>447 inches; Nuclear Chemistry</li> </ol> </li> <li>Comments incorporated. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
27	F	2				x	x							B	E S	<p>WE16 EA2.2</p> <p>Note to Examiner: The proposed test item description sheet states that this question is a modified version of Q#20 on the ILC 22 NRC exam; however, the original version of the proposed test item was not provided with the submittal. A question related to the effect of a Phase B isolation on the RCPs and continued RCP operation was included with the proposed test item; however, it is not at all similar to the proposed test item or its associated K/A. Discuss w/ licensee.</p> <ol style="list-style-type: none"> <li>Cred Dist: "A" is not plausible because a Unit 3 NOP procedure for the Post Accident Containment Ventilation System apparently does not exist. There is a "0" NOP-051.2 procedure with this title; however, the "0" procedure is merely a valve lineup, i.e., no system operation guidance in the document.</li> <li>Cred Dist: "D" may not be entirely plausible because diluting the containment (i.e., bringing in fresh air) to lower radioactivity would contaminate the public. Can we strengthen this choice?</li> <li>Partial: An applicant could potentially argue that there is no correct answer because the wording of choice "C" doesn't match the procedure's wording, i.e., "verify containment AND control room ventilation isolation" and "verify at least 2 emergency containment filter fans running."</li> <li>Licensee stated that Post Accident System also discharges outside.; therefore "D" was plausible. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
28	H	2	x			x								B	E S	003 K2.01 1. Stem Focus: The 3 <sup>rd</sup> bullet is not necessary to elicit the correct response. 2. Stem Focus: The 2 <sup>nd</sup> bullet should have the word "Compartment" or "Cubicle" before the ID# 3AA05. 3. Cred Dist: Enhance the plausibility of "C" and "D" by re-writing the question stem and choices as follows: <i>WOOTF identifies how many RCPs will lose 4KV power and whether the reactor will automatically trip?</i> A. Only one RCP; Reactor will auto-trip B. <b>Only one RCP; Reactor will NOT auto-trip</b> C. Two RCPs; Reactor will auto-trip D. Two RCPs; Reactor will NOT auto-trip 4. Comments incorporated. Question is SAT.
29	H	2	x							x				N	E S	004 K3.07 1. Stem Focus: The stem should provide the initial power level. 2. #/units: The 2 <sup>nd</sup> bullet should include the integrator device noun name and ID # instead of "blended makeup flow is set for..." 3. Stem Focus: "C" and "D" should state that the "Pneumatic supply is to to..." instead of stating that the "instrument air is lost to..". This will ensure that backup pneumatic supplies (if any) are also implied to be gone. 4. Stem already included the exact noun name and there is no redundant pneumatic supply. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
30	F	2				x								N	U S	<p>005 K4.06</p> <p>1. Cred Dist: "C" and "D" are not plausible for two reasons. First, there is a subset issue with the second portions of these two choices. The 2<sup>nd</sup> portion of "C" and "D" are not independent of each other, i.e., IF the LOCA analysis did assume at least one RHR pump running THEN this is virtually the same thing as the 2<sup>nd</sup> part of "C", it will be needed when pressure drops below the shutoff head. The applicant can deduce that these choices essentially are the same and eliminate both of them because he/she knows there can be only one correct answer.</p> <p>The second reason that "C" and "D" are not plausible is because the 2<sup>nd</sup> bullet states that RCS pressure is steady. An applicant can deduce that the 1<sup>st</sup> part of "C" and "D" is incorrect based on the word "steady" used to describe 1500 psig.</p> <p>Suggest testing the min flow valve auto-open and auto-close feature/interlocks.</p> <p>2. The licensee revised the test item to include the max RCS pressure that the RHR pumps are allowed to be left running. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
31	H	4	x			x								N	E S	<p>005 K5.09</p> <p>Note to Examiner: Because this question tests applicants' knowledge of <math>\leq 1</math> hour Tech Spec action statements, it is considered RO knowledge. Also, the information "above-the-line" in Tech Spec 3.9.8.1 contains the answer.</p> <p>1. Stem Focus: The stem question is confusing because it does not elicit both parts of all four choices. Is the stem question asking whether or not the RHR pump is allowed to be stopped or flow reduced and the required actions and/or reasons?</p> <p><i>WOOTF identifies the allowances and/or restrictions for RHR during the core reload, including the reasons, in accordance with Tech Spec 3.9.8, RHR and Coolant Circulation – High Water Level?</i></p> <p>A. <i>The RHR Pump can be stopped, but only for up to one hour provided that core outlet temperature is maintained 10 deg below saturation.</i></p> <p>B. <i>The RHR Pump can be stopped, but only for up to one hour provided no operations are permitted that can cause a reduction in boron concentration.</i></p> <p>C. <i>The RHR Pump is NOT allowed to be stopped; however, the flow may be reduced to less than 1000 gpm provided RCS temperature is maintained less than 140 deg F.</i></p> <p>D. <i>The RHR Pump is NOT allowed to be stopped and flow is NOT allowed to be reduced while the core reload is in progress.</i></p> <p>2. Cred Dist: "A" is not plausible because the reactor head is removed, i.e., saturation is not allowed, and because the core outlet temperature will not be accurate if the RHR pump is stopped.</p> <p>3. Stem focus: The word "continuously" is not necessary in the 3<sup>rd</sup> bullet. Additionally, the phrase "for the last" should be used before 24 hours.</p> <p>4. Comments incorporated. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
32	H	2					x							N	E S	<p>006 K6.10</p> <p>1. Partial: Re-word the stem question as follows to ensure only one correct answer:</p> <p>Given the current alignment, WOOLF identifies the minimum required action(s), if any, to establish a suction flowpath to the 3B RHR Pump?</p> <p>A. A flowpath already exists to the suction of the 3B RHR Pump. No further action is required.</p> <p>B. Opening both MOV-3-860A AND MOV-3-860B is required to establish a flowpath to the 3B RHR Pump.</p> <p>C. Opening MOV-3-860A OR MOV-3-860B will establish a flowpath to the 3B RHR Pump.</p> <p>D. ONLY opening MOV-3-860B will establish a flowpath to the 3B RHR Pump. Opening MOV-3-860A will NOT establish a flowpath to the 3B RHR pump.</p> <p>2. Comments incorporated. Question is SAT.</p>
33	H	2	x	x										B	E S	<p>007 A4.01</p> <p>Note to examiner: This question overlaps with SRO Q#86 because this question provides the name of the procedure which is used to restore PRT parameters.</p> <p>1. Ensure no overlap with SRO Q#86</p> <p>2. Cue: The 4<sup>th</sup> bullet includes a cue to the applicants because it also states that the 3-519A position is "open." The 2<sup>nd</sup> bullet already stated that the operators are raising the PRT level; therefore, the 3-519A has to be open.</p> <p>3. Stem Focus: The stem question should be worded as "WOOLF predicts the position of 3-519A and 3-519B after the annunciator alarmed?"</p> <p>4. Comments incorporated. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
34	H	2				x								N	E	008 A3.04 1. Cred Dist: To enhance the plausibility of "A" and "C", revise the 2 <sup>nd</sup> fill-in-the-blank statement to eliminate the part about "due to the switches being in the pull-to-lock position." Re-word as follows:  <i>WOOTF choices completes both statements in accordance with 4-OP-050, Residual Heat Removal System and Tech Spec 3.7.2, Component Cooling Water System?</i>  <i>The crew is required to place _____ CCW Pump(s) to the PULL-TO-LOCK position.</i>  <i>Entry to an action statement for Tech Spec 3.7.2 _____ required for this mode.</i>  A. One; IS B. One; is NOT C. Two; IS D. Two; IS NOT 2. Comments incorporated. Question is SAT.
35	H	2		x										N	E	008 A4.07 1. Cues: The wording of the 5th bullet is a cue that "D" is the correct answer.  Suggest testing the applicants' knowledge of when the alarm will actuate and whether or not the MOV-3-382 is a seal-in or throttle-open ("inching") valve as follows:  <i>WOOTF identifies when the CCW HEAD TANK HI/LO LEVEL alarm (H 8/6) will be received on a lowering level and how the motor-operated valve MOV-3-832, Primary Water Makeup to CCW Surge Tank, operates?</i>  A. 10%; Seal-in B. 25%; Seal-in C. 10%; throttle open (or "inching") D. 25%; throttle open (or "inching")  2. The licensee argued that testing the alarm setpoint was minutia. Instead, the licensee changed "B" to start a 2 <sup>nd</sup> primary water makeup pump and reworded the stem bullet associated with MOV-3-832. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
36	F	2	x			x	x	x							N	E S	<p>010 K5.02</p> <p>Note to examiner: The "operational implication" being tested in this K/A is the resulting control room temperature indication on TI-3-463.</p> <ol style="list-style-type: none"> <li>Job-Link: The ARP-097.CR.A, Window 7/2 [PZR PORV HI TEMP] Step 1 says to verify that the TI-3-463 is indicating <u>greater than</u> 250 deg F even though the correct answer for this test question is 220 deg. Is this discrepancy due to a throttled PORV vs a fully open PORV? Discuss w/ the licensee making this question just like what is observed in the simulator and on the real plant. May need to confirm expected temperature indication on the simulator for a leaking (throttled) PORV.</li> <li>Stem Focus: Specify the location of the PORV tailpipe temperature indicator in the 1<sup>st</sup> fill-in-the-blank statement, i.e., "The PORV tailpipe temperature on TI-463 at panel VPA will indicate approximately _____."</li> <li>Cred Dist: "B" and "D" may not be plausible IF the TI-463 meter does not go all the way to 650 deg F. What is the highest value on the meter? Suggest replacing 650 deg with a slightly lower value (but incorrect) to add some plausibility, i.e., the normal 100% value for Tavg.</li> <li>Partial: An applicant can successfully argue that the PORV tailpipe temperature indication "can be used" to determine which PORV is leaking by...<u>in conjunction with other actions</u> such as closing the block valve, etc. In other words, "A" can be argued as correct if the applicant assumes that the resulting temperature indication is valid and uses this information to continue troubleshooting efforts. He/she can argue that they did indeed use the temperature indication to determine which PORV was leaking because this statement did not state that the temperature indication was not the sole means or exclusively used to determine which PORV was leaking.</li> <li>Licensee included the phrase "with no operator action.." Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
37	F	2	x				x							M	E S	012 G2.2.25 1. Partial: Discuss w/ the licensee how "D" can also be argued as correct. (See description in bases and also in SD 063, page 39 for how the OTdeltaT setpoint is automatically varied). 2. Stem Focus: add the phrase to the 1 <sup>st</sup> fill-in-the-blank statement: "In accordance with the 0-ADM-536, Technical Specification Bases Control Program <u>for the Reactor Trip System Instrumentation Setpoints</u> . . ." 3. Comments incorporated. Question is SAT.
38	H	3		x		x								N	E S	013 G2.4.46 1. Cue: The last bullet is a cue and is not necessary to elicit the correct response. 2. Cred Dist: "C" may not be plausible. Justification for the 485 psig SG pressure value was not provided with the proposed question. Discuss w/ the licensee 3. Cred Dist: "B" may not be plausible if there are no "automatic" blocks of SI at Turkey Point. Discuss w/ the licensee.  Suggest the following changes:  Delete the last 3 bullets from the stem and ask the following question:  <i>WOOTF predicts the expected annunciator alarms for these plant conditions?</i>  A. C9/3 and C8/6 will both be alarming B. Both C9/3 and C8/6 will NOT be alarming C. C9/3 will be alarming; C8/6 will NOT be alarming D. C9/3 will NOT be alarming; C8/6 will be alarming  4. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
39	H	2				x								B	E S	013 K6.01 1. Cred Dist: IF an applicant did not know the SI or RPS trip setpoints, then he/she could logically eliminate "B" because <i>if</i> 2/3 bistables are below 1835 psig, then they would certainly also be below 1730 psig. (subset issue) 2. Cred Dist: Similar argument for "C" and "D", i.e., 1730 psig ("C") is below 1835 psig ("D"); therefore, an applicant will <u>always</u> pick "C" when he/she doesn't know the setpoint. 3. Licensee stated that use of the specific word "setpoint" precludes the subset concerns. Question is SAT.
40	F	2	x											N	E S	022 K4.04 1. Stem Focus: The word "correctly" is not necessary to elicit the correct choice. Use " <i>WOOTF identifies whether or not...</i> " 2. Stem Focus: insert the prefix "re-" before each of the words "started" in the choices. 3. Stem Focus: clarify in the stem question that the 3A and 3B 4KV Busses' sole power supply is the diesel. 4. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
41	F	2											x		N	E S	<p>026 A1.05</p> <p>Examiner note: At Turkey Point, automatic operation of the Containment Spray system introduces boric acid (from the RWST) into the containment. In order to minimize corrosion of the equipment inside containment, the operators are required to mix and inject (via charging pumps and 95% level in the BAT) 160 lbs of Decahydrate into the RCS before 8 hours has elapsed into the LOCA event.</p> <p>The selected K/A can still be met by testing the applicants' ability to predict or monitor changes in the BAT level and concentration when the Decahydrate is being mixed or injected following Containment Spray auto-operation from the RWST.</p> <ol style="list-style-type: none"> <li>Q=K/A: The proposed question tests the applicants knowledge of <i>when</i> Decahydrate is required to be injected (before swapping to hot leg recirc) and <i>where</i> the solution is required to be mixed (BAT). The K/A requires testing the applicants' ability to predict and/or monitor the tank <i>level</i> and <i>concentration</i>. In other words, incorporate testing the applicants' ability to monitor the "amount" of something associated with Decahydrate.</li> <li>Licensee was concerned that proposed comment was going into minutia. K/A was replaced. Question is SAT.</li> </ol>
42	H	3	x	x											N	E S	<p>026 K2.02</p> <ol style="list-style-type: none"> <li>Stem Focus: The Initial conditions section needs to include the plant power level so that the applicant knows the initial lineup of MOV-4-880A and -880B. (i.e., initial position is closed)</li> <li>Cue: The 3<sup>rd</sup> bullet should provide a containment pressure value instead of stating that the actuation setpoint was reached.</li> <li>Stem Focus: The grammar associated with the stem question ("will respond") doesn't match the "C" and "D" choices, i.e., opened ←past tense.</li> <li>Comments incorporated. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
43	H	2	x				x	x							B	E S	<p>039 A2.05</p> <ol style="list-style-type: none"> <li>Partial: Because of the gradual failure in the high direction and because the exact trip set point values for the OPdT and OTdT trips can be variable, an applicant could potentially argue that there is no correct answer. Ask the licensee to show that the set points are 103%</li> <li>Additionally, because of the words "could" and "approximately" in the stem statement, this question becomes too subjective for interpretation.</li> <li>Job-link: What procedure at Turkey Point (ONOP?) provides direction to lower turbine load if an atmospheric relief valve fails open? Is the Conduct of Ops Reactivity control Section 4.4.3.7 the only guidance? Are there any alarms that would be received if the atmospheric relief failed open?</li> <li>Job-link: Need to run this on the simulator to obtain all alarms, trip values, etc.</li> <li>Stem Focus: the words "could rise" and "approximately" are subjective.</li> <li>Licensee ran this question on the simulator to obtain a spread of values instead of a specific power level. Comments incorporated. Question is SAT.</li> </ol>
44	H	3													N	E S	<p>059 A2.01</p> <ol style="list-style-type: none"> <li>Stem Focus: In the stem question, replace the phrase "clear the AFW auto start signals" with the observations that the control room operator would see, i.e., ALL AFW AUTO START 3QR50 and 3QR51 white indicating lights are EXTINGUISHED.</li> <li>This question may overlap with SRO Q#76</li> <li>As written, the question does not overlap w/ Q#76. Comment #1 not incorporated to avoid overlap. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
45	H	2												B M	E S	<p>059 A2.11</p> <p>1. This question is too similar to Scenario #4, Event 4, Failure of Instrument Bus 3P07. This question is also on the ILC 24 audit exam. For a loss of 3P07, the 3B FRV is in manual whereas in the proposed test item, the FRV is in auto-lockup. The Scenario already tests the applicants' knowledge of a loss of an Instrument Bus on the FRV.</p> <p>Suggest writing a question to test the applicants' ability to predict how the failure of Instrument Bus 3P07 will affect a different aspect of the FW system. For example, a two part question dealing with a failure of the Bus 3P07 and how this will affect the Reactor Trip recovery activities, i.e., the loss of the FW Isolation Signal (Lo Tavg) will affect SG levels and the required actions following the trip.</p> <p>2. License re-worked question to test a loss of Panel 4P09. Question is SAT.</p>
46	F	2	x				x							B	E S	<p>061 K1.05</p> <p>1. Partial: Because the stem question doesn't specify whether the question is asking for one CST tank or for the combined volume of both CST tanks, an applicant can successfully argue that "A" is also correct.</p> <p>2. Stem focus: Re-word the 2<sup>nd</sup> part of "A" (and the other choices as appropriate) as follows:</p> <p><i>Sufficient water is available to the AFW system to maintain both Units in Hot Standby for no more than 15 hours and then to cool down the RCS to &lt; 350 °F.</i></p> <p>3. Stem focus: The stem question should include a phrase "in accordance with the ADM bases for TS 3.7.1.3."</p> <p>4. Licensee incorporated new 2<sup>nd</sup> part of the question to test applicants' knowledge of where the AFW pumps take a suction (i.e., both CSTs simultaneously). Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
47	H	2				x							x		N	U S	<p>062 A1.03</p> <p>Examiner note: The QSPDS system is not to be confused with the SPDS. The QSPDS is a CE system that includes two orange plasma displays and is sometimes referred to as the Inadequate Core Cooling System and its functions include the subcooling margin monitor, reactor vessel level monitor, and core exit thermocouple displays.</p> <ol style="list-style-type: none"> <li>1. Cred Dist: The distractor analysis did not explain why any of the "not available" choices, i.e., "B", "C", and "D" are plausible. The way the proposed question is worded is that the instrument bus remains powered. How is it plausible that the QSPDS channels' indications wouldn't be available when either the transformer or spare inverter is powering the system?</li> <li>2. Q=K/A: The proposed K/A requires testing the applicants' ability to predict or monitor CHANGES associated with instrumentation and controls when the AC distribution system has been operated. The correct answer to the proposed question is "no change", i.e., "available." In order to meet the K/A the applicants must be required to predict how the orange plasma display will look when some portion of the AC distribution system has been operated. Since there is "no change", then the K/A is not being met.</li> <li>3. It appears that the training material may not be up-to-date (SD 071/SYS.095, 9/24/03, page 29 and Lesson Plan 6902171, 5/13/97, page 10) because it states that the QSPDS power supply CANNOT be transferred to the spare inverter even though Drawing Number 5610-T-E-1592, Sheet 1 shows a modification. Based on the SD 071 information, it appears that the correct answer is "B"; however, the question indicates that "A" is the correct answer.</li> <li>4. Licensee incorporated new initial conditions which met concern with comment #2. Question is SAT.</li> </ol>
48	F	2													B	S	<p>063 K1.02</p> <p>Examiner Note: This question is an exact repeat from the ILC 24 audit exam.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
49	F	2	x											N	E S	064 K1.03 1. Stem Focus: The stem question's "in accordance with" phrase is missing Turkey Point Emergency Power System Component Design Requirements Document 5610-023-DB-002. Alternatively, IF the ADM bases provide the fuel economy values, then that document can be used in the phrase. 2. Comment incorporated. Question is SAT.
50	H	2	x			x	x							B N	E S	064 K6.07 1. Partial: An applicant could successfully argue that "A" is also correct because 1) the stem doesn't say that the leak was "unisolable" and 2) because the stem only says the "A" receiver depressurizes, i.e., doesn't provide the status of the "B" air receiver. The applicant could "reasonably" argue that the air compressors were keeping the "B" receiver pressurized. 2. Cred Dist: "C" is not plausible because the applicant can reasonably assume (without really knowing the system) that redundancy is built into the design so that IF one set of air start motors is available, then the 4A DG start capability is unaffected. 3. Stem Focus: Re-word the 1 <sup>st</sup> sentence as follows: <i>"A large leak on the 4A EDG "A" Air Receiver Tank cannot be isolated."</i> 4. Licensee reworked question to address concerns. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
51	H	2												M	E S	<p>073 K5.01</p> <p>Examiner Note: Previous NRC exam had this question where the answer was Fission Products ("D").</p> <ol style="list-style-type: none"> <li>The reference material (that describes how the crud burst sample is different than a fuel cladding failure sample) for this question was not provided. The references listed in the distractor analysis identify lesson 6900138 EO4 as the supporting lesson/learning objective; however, this lesson appears to be "Main Power Distribution." (typo? Should be 6900168??) Discuss w/ licensee. Also need to reference SD 068, ARP-097.CR H1/4, and ONOP-041.4.</li> <li>Request that the licensee change the 1<sup>st</sup> part of the question to be different than the previous NRC exam question; suggest:                     <p style="margin-left: 40px;"><i>WOOTF identifies the type of detector utilized by the PRMS-3-20, Reactor Coolant Letdown Monitor, and what the operational implication is for these sample results?</i></p> <ol style="list-style-type: none"> <li><i>Scintillation; Sample results indicate a crud burst has occurred</i></li> <li><i>Geiger Mueller; Sample results indicate a crud burst has occurred</i></li> <li><i>Scintillation; Sample results indicate a fuel cladding leak has occurred</i></li> <li><i>Geiger Mueller; Sample results indicate a fuel cladding leak has occurred</i></li> </ol> </li> <li>Licensee modified the question. Question is SAT.</li> </ol>
52	H													N	E S	<p>076 A4.04</p> <ol style="list-style-type: none"> <li>Stem Focus: Are any of the bullets necessary? Can the question be simply put- "WOOTF describes the effect of the SI on the CCW and ICW Systems?"</li> <li>Q=K/A: Is there an ICW flow indicator in the control room? If so, then test the applicants' ability to monitor that indicator by adding the indicator number to the 2<sup>nd</sup> fill-in-the-blank statement. If not, then discuss how "monitoring in the control room" is being met with proposed question.</li> <li>Question was steamlined. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
53	H	3		x				x						M	E S	076 K2.04 Note: There's nothing wrong with testing the RO applicants knowledge of CCW pumps or valves' power supply in a more direct way. 1. Job-link: Is there another way to tell the RO applicants that two remaining CCW pumps are from independent power supplies without using the 30-day-action-statement wording? Does the procedure for removing the CCW pump from service require that the two remaining pumps be powered from different power supplies? If so, then the 3 <sup>rd</sup> bullet can be worded to say that the actions IAW [procedure section] have been completed. An applicant may argue that this question goes beyond RO knowledge since the 3 <sup>rd</sup> bullet requires knowledge of the 3.7.2 "A" action statement. 2. Cue: Re-word the stem question to eliminate the reference to automatic actions. "WOOTF predicts the final status of the 4C CCW Pump?" 3. Comments addressed by revising question. Question is SAT.
54	H	3						x						N	S	078 A3.01 1. Job-link: Is the 3 <sup>rd</sup> bullet artificial? In the real plant, would the pressure at the air filters be the same as the pressure at the air receiver when the system is cycling between 100 psig and 105 psig? Discuss w/ licensee where the controls actually "sense" pressure at. Is this bullet necessary? If the applicants' assume that the pressures are different, could it change the answer? 2. Licensee stated that 3 <sup>rd</sup> bullet (although somewhat artificial) was necessary to ensure that only one correct answer existed. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
55	F	2	x											M	E S	103 A1.01  Note to examiner: The K/A (ability to monitor changes associated with operating the system controls) is being met because the proposed question is testing a requisite knowledge that the operator must have in order to successfully monitor the changes while operating the system controls.  1. Stem Focus: The 2 <sup>nd</sup> bullet should specify that this is the AVERAGE temperature.  2. Stem Focus: The word "a" is not necessary.  3. Comments incorporated. Question is SAT.
56	H	2												N	E S	001 K3.02  1. The 1 <sup>st</sup> part of this question (fast load reduction boration rate) overlaps with the simulator operating exam scenarios, i.e., several scenarios require applicants to borate during a fast load reduction.  Suggest keeping the 2 <sup>nd</sup> portion of the question (how delta-I will trend) but replacing the 1 <sup>st</sup> portion of the question with whether or not rod motion is inhibited. (Applicant must interpret that urgent failure alarm means all rod motion inhibited.)  2. Comment incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
57	F	3				x				x	x			N	E S	<p>028 A4.03</p> <p>Note to Examiner: Turkey Point received an exemption (December 2001) from the H2 recombiner requirements of 10CFR50.44 and Appendix A GDC 41, 42, and 43 because the large dry containment can withstand effects of hydrogen combustion w/o hydrogen control. Nevertheless, Turkey Point does have post accident hydrogen analyzers.</p> <ol style="list-style-type: none"> <li>Cred Dist: "C" and "D" are not plausible because other SI signals could also lead to hydrogen generation in containment. Furthermore, because the EOPs are not "event based" procedures, prescribing an action based solely on one "kind" of safety injection signal is not plausible. The acronym "LOCA" is not defined and could be subjective; therefore, the applicants can eliminate these choices without knowing the procedure requirement.</li> <li>#/units: The stem is missing the hydrogen monitor ID numbers (AE-3-6307A and -6307B) and is missing the Attachment 3 (prompt action verification) where the 30 minute requirement specifies following a valid SI signal</li> <li>Backward Logic: The two fill-in-the-blank statements are not in the logical order, i.e., the annunciator is normally bypassed (for 4% hydrogen alarm) since the monitors are in standby. The 2<sup>nd</sup> fill-in-the-blank statement should be the first because in a real accident, the monitors would be placed in service and THEN the annunciator (for 4% hydrogen alarm) becomes significant. Suggest the following:  <i>WOOTF completes both statements?</i>  <i>The PAHMS (AE-3-6307A and -6307B) are required to be placed in service within _____ following a valid SI signal, in accordance with 3-E-0, Attachment 3, Prompt Action Verification.</i>   <i>The PAHMS TROUBLE annunciator (I 6/5) alarm set point for containment hydrogen is _____ in accordance with the annunciator procedure.</i> <ol style="list-style-type: none"> <li>30 minutes; 2%</li> <li>30 minutes; 4%</li> <li>60 minutes; 2% (plausibility is chiller following LOOP)</li> <li>60 minutes; 4%</li> </ol> </li> </ol> <p>4. Comments incorporated. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
58	F	5						x						B N	E S	033 K4.04 1. LOD = 5 and/or Job-link: The proposed question tests the RO applicants' knowledge of the Tech Spec Bases for the minimum level in the spent fuel pool. This is beyond RO knowledge (as discussed in the SRO Clarification Guidance Document) and could make the question grounds for an appeal.  2. Partial: The applicant could successfully argue that there is no correct answer because the Tech Spec Bases doesn't include the word "only." In other words, the shielding basis wording says " <i>sufficient shielding during fuel movement.</i> " The reason the word "only" is used in each of the 4 choices is to imply that "only these words are in the bases."  Suggest writing a 2 part question to test the RO's knowledge of how far above the top of the fuel assemblies the water level is normally maintained (at 100% power) and the portion of cooling flow that is diverted to the purification loop (5%).  3. Licensee wrote new question to test applicants' knowledge of the setpoint for the SFP LO LEVEL alarm and the LCO for pool water level. Question is SAT.
59	H	3	x											N	E S	041 G2.2.42 1. Stem Focus: In the 2 <sup>nd</sup> fill-in-the-blank statement, include the words "in accordance with...[procedure or Tech Specs]. 2. Stem Focus: the stem question should be plural, i.e., the last word should be statements. 3. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
60	H	2	x				x							N	U S	045 K5.18 1. Cred Dist: "B" and "D" are not plausible because the reason provided with these 2 choices (" <i>...not a concern at this power</i> ") doesn't exist. In other words, there is never a "reason" provided in any document for why the reactor doesn't trip. For "D", a PORV opening is <i>always</i> a concern. Since the stem question asked for a basis, "B" and "D" can be eliminated since the basis provided is "not a concern." 2. Partial: "C" could also be argued as correct because a secondary effect of losing the heat sink could be a PORV opening. 3. Stem Focus: the word "automatically" should be added to the sentence just below the bullets and also throughout each of the 4 choices as necessary. 4. Stem Focus: the stem question can be more succinctly worded as " <i>WOOTF predicts whether the reactor will automatically trip, including the reason IAW?</i> " 5. Stem Focus: The stem question should include the phrase "in accordance with..." [Is it RPS Design Basis Document 5610-049-DB-001?] 6. Licensee reworked question to test applicants' knowledge of whether a reactor trip will occur and the basis for either a turbine trip or reactor trip. Question is SAT,

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
61	H	2					x							B	E S	<p>056 A2.04</p> <p>Examiner note: For the 2<sup>nd</sup> part of A2 K/As on an RO exam (i.e. "use procedures to correct, control, or mitigate"), it's acceptable to test the RO applicant's ability to recognize a correct action from a procedure because this is "using" procedures. Unlike the SRO exam, procedure "selection" is neither required nor prohibited.</p> <p>Additionally from ES-401, Section D.2.a: "When selecting or writing questions for K/As that test coupled knowledge or abilities (e.g., the A.2 K/A statements in Tiers 1 and 2 and a number of generic K/A statements, such as 2.4.1, in Tier 3), try to test both aspects of the K/A statement. If that is not possible without expending an inordinate amount of resources, limit the scope of the question to that aspect of the K/A statement requiring the highest cognitive level (e.g., the (b) portion of the A.2 K/A statements) or substitute another randomly selected K/A." The proposed question tests both aspects of the K/A since the applicant needs to 1<sup>st</sup> predict whether a feed pump trip occurs.</p> <p>1. Partial: An applicant could argue that any of the choices are correct because the stem does not specify plant response and the plant response could be different depending on other conditions such as conservative decision-making, time in core life, etc.</p> <p>Suggest re-working the question to test the applicants' 1) ability to predict "how" the plant will respond, (whether or not the feed pump suction pressure will reach the trip setpoint, etc.) and 2) ability to recognize a required subsequent action listed in ONOP-089.</p> <p>2. Licensee re-worked question. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
62	H	3	x											B	E	068 K6.10
															S	1. Stem Focus: Specify the panel number or location of the feeder breaker to the PRMS Rack 3QR66. Is the breaker located at Rack 3QR66? (need to be sure that this breaker exists) 2. Stem Focus: Specify which liquid tank and which waste gas tank is being released. (need to be sure procedurally allowed to do at the same time) 3. Stem Focus: For the noun names of RCV-014 and -018, add the word "Note:" just before to ensure no one gets confused that this information is there to clarify noun names. 4. Comments incorporated. Question is SAT.
63	F	5	x									x		N	E	072 A1.01
															S	1. Q=K/A and/or LOD=5: the 2 <sup>nd</sup> part of the question doesn't deal with the K/A and can be argued as SRO-only knowledge. An RO applicant could potentially argue (on an appeal) that the knowledge of "who" makes the call on containment radiation integrated dose values (TSC) is well beyond RO knowledge. 2. Stem Focus: Re-word the question as follows: <i>WOOTF completes the following statements in accordance with 4-EOP-E-0, Reactor Trip or Safety Injection, foldout procedure?</i> <i>IF containment radiation levels are ≥ _____, THEN use adverse containment setpoints.</i> <i>Test another knowledge associated with the CHRRMS panel meters or lights here.</i> 3. Licensee incorporated comments. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
64	H	2	x											B	E S	079 K1.01 1. Cred Dist: "B" and "D" <u>may</u> not be plausible IF there aren't other examples of situations at Turkey Point when a fossil unit's system is used to support the nuclear unit and the actions are directed by the nuclear unit's procedures. 2. Cred Dist: "A" is not plausible because this doesn't exist and can be reasonably excluded by an applicant based on safety principles. 3. Stem Focus: The valve numbers should be included in each choice. 4. Licensee provided examples of procedures (NOP-72) such as aux steam, hydrogen, and CO2. Question is SAT.
65	F	2	x			x								B	E S	086 A4.01 1. Cred Dist: "C" is not plausible because an electric pump will always be used before a diesel pump due to the maintenance involved with diesel engines. 2. Stem Focus: The proposed question is disjointed because it mixes the concept of keeping the fire header pressurized (during normal standby conditions) with the concept of automatic pump start set points. The stem uses the wording "sources of water" even though the choices all involve "sources of pressure." Consequently, an applicant could potentially argue that there is no correct answer. 3. Comments incorporated. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
66	F	2	x			x								M N	E S	<p>G2.1.1</p> <ol style="list-style-type: none"> <li>Cred Dist: Ask the licensee to clarify how long it has been (within the last two refueling cycles?) since the 15 minute walk down expectation was changed to "a frequency to assure a constant awareness." Similar info needed for US expectation.</li> <li>Examiner Note: This question would be well suited for a fill-in-the-blank IF the NAP-402 didn't list all 11 "key" parameters. Item 1) listed in the stem is the next best way to write the question provided the wording is very closely aligned. Item 2) in the stem can become a fill-in-the-blank statement very easily.</li> <li>Stem Focus: add the word "often" after the first word in item 1 listed in the stem, i.e., "1) how often the RO..."</li> <li>Stem Focus: re-word item 2 in the stem to say:  2) whether a person in a licensed supervisory position, such as the US assigned to command and control responsibilities, is allowed to assume the operator "at the controls" position if it becomes necessary for the operator "at the controls" to perform other duties.  A. 2) Is allowed B. 2) Is NOT allowed C. 2) Is allowed D. 2) Is NOT allowed</li> <li>Licensee stated that upcoming (new) procedure philosophy changes could yield two correct answers. Question re-worked. Question is SAT.</li> </ol>
67	F	2				x								B	E S	<p>G2.1.18</p> <ol style="list-style-type: none"> <li>Cred Dist: "A" and "C" are not plausible because a person with no knowledge of the ADM-204 can reasonably eliminate these choices since neither of them include "10:35."  Suggest converting this question into a 2 part test item and testing another piece of knowledge such as a requirement associated with a turnover sheet/report.</li> <li>Licensee reworked the sequence of the log entry choices. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
68	F	2	x					x						B	E S	<p>G2.1.23</p> <p>1. Job-link: Because integrated operating procedures such as 3-GOP-305 allow simultaneous performance of many steps, an applicant can argue that there is more than one correct answer OR that there is no correct answer. For example, the procedure only specifies that RHR be placed in service when RCS temperature is less than 350 deg and pressure is less than 450 psig. Couldn't the crew be placing RHR in service at the same time OMS is being placed in service? It appears what the question is really asking is:</p> <p><i>"WOOTF activities is numerically listed FIRST in 3-GOP-305, Hot Standby to Cold Shutdown?"</i></p> <p>Discuss whether it's possible to word the stem question can be worded as listed above.</p> <p>2. Stem Focus: The 1<sup>st</sup> two bullets make the question hard to answer since RCS pressure is listed as 2235 psig. Is it necessary to have these two bullets?</p> <p>3. Comments incorporated. Question is SAT.</p>
69	F	2	x											B	E S	<p>G2.2.3</p> <p>1. Partial: Unless the trips are defined as "essential" and "non-essential" in a plant procedure, then this question can be argued as having more than one correct answer. In other words, essential and non-essential is subjective unless it is defined somewhere.</p> <p>2. Stem Focus: Reword the stem question as follows:</p> <p><i>"WOOTF describes the difference between Unit 3 and Unit 4 EDGs?"</i></p> <p>3. Comment incorporated. Question is SAT.</p>
70	F	2												M	S	<p>G2.2.42</p> <p>Examiner note: This is a modified question from the last NRC exam.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
71	H													N	E S	<p>G2.2.43</p> <p>1. Partial: The 2<sup>nd</sup> part of the question does not have anything to do with the 1<sup>st</sup> part of the question. (appears disjointed). Additionally, because the procedure uses the word "should" there is room for interpretation which could also make "B" a correct answer.</p> <p>Suggestion: IF there are annunciators that don't require an entry to the annunciator status log (when removed from service for 2 days) THEN test the applicants' knowledge of that exemption. Alternatively, write the question to test the RO applicants' knowledge of some aspect of the ODI-CO-039, Enclosure 1 flowchart process.</p> <p>2. Licensee re-worked stem. Question is SAT.</p>
72	H	3						x						B	E S	<p>G2.3.4</p> <p>Examiner Note: The RO and SRO Admin JPMs do not overlap with this question. The Rad Control topic is not being tested on the RO operating exam and the SRO A.3 topic tests the applicants' knowledge of emergency dose limits. The proposed written test item tests the RO applicants' knowledge of normal administrative dose limits.</p> <p>1. Job-link: 0-ADM-600 does not define 1000 mrem TEDE as an "administrative limit"; therefore, an applicant can argue that this question is invalid. In accordance with Attachment 1, the FPL GUIDELINES is 2.5 rems/yr (per FPL plant).</p> <p>Suggest re-wording the stem to test the applicants' knowledge of the maximum time the employee can stay in the area <i>WITHOUT REQUIRING A DOSE EXTENSION</i>.</p> <p>2. Comment incorporated. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
73	F	2	x						x						N	E S	<p>G2.3.7</p> <p>1. Job-Link: Is the "Ops Department Routine Activities" RWP a "job-specific" RWP? (not labeled) If not, then it appears that Ops isn't complying with Section 4.6.1.B which states: "General RWPs should be used for routine work which does NOT involve work in high dose rate areas." This apparent compliance issue may involve the definition of "work."</p> <p>Another RWP (titled "Routine Operations and Surveillances") was provided with the proposed test item; and is labeled as a "job-specific" RWP. Refer to licensee and to the Resident Inspector for clarification.</p> <p>2. Stem Focus: The stem does not identify WHY the SNPO is entering the room, consequently, this question may have more than one correct answer or no correct answer.</p> <p>3. Stem Focus: Because both "C" and "D" each have 3 items in each choice, the 2<sup>nd</sup> item ["The Operations routine RWP allows entry into the above field with an appropriate brief."] can be deleted, i.e., not necessary to elicit the correct response.</p> <p>Suggest re-writing question as follows:</p> <p>The SNPO _____ to enter the room alone while he/she is only signed onto the RWP for Operations Routine Activities.</p> <p>A PAM or Telemetric Dosimeter _____ required.</p> <p>A. Is allowed; is NOT                      B. Is allowed; is                      C. Is NOT allowed; is NOT                      D. Is NOT allowed; is</p> <p>4. Comments incorporated. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
74	H	2	x											N B	E S	<p>G2.4.11</p> <p>Note to Examiner: The wording of this K/A allows testing the applicants' knowledge of ANY ONOP. The proposed test item tests' the applicants' knowledge of the rules of usage for the concurrent use of EOPs and ONOPs, which also could target G2.4.8, "Knowledge of how abnormal operating procedures are used in conjunction with EOPs." Because the proposed test item deals with ONOP-041.1, the proposed test item meets the intent of K/A G2.4.11.</p> <ol style="list-style-type: none"> <li>1. Stem Focus: Each of the four choices don't specify which procedure is being referred to, i.e., are the choices talking about E-0 or ONOP-041.1. [assume E-0; however, the applicants' may be confused and ask the question.]</li> <li>2. Stem Focus: The stem question asks for the requirements for tripping the 4A RCP but each of the choices describes steps in E-0. This is confusing.</li> <li>3. Stem Focus: Streamline each choice to make this a 2-part question to test the applicants knowledge of 1) what parameter requires the RCP to be tripped when vibration is greater than or equal to 5 mils (motor frame or RCP shaft) and 2) "when" the RCP is required to be tripped (before E-0 is entered or after Step 1 of E-0 has been completed).</li> <li>4. Stem Focus: The 2<sup>nd</sup> and 3<sup>rd</sup> bullets can be combined to be "present tense", i.e., is experiencing high vibes and crew is performing ONOP-41.1.</li> <li>5. After the operating test, Chief Examiner determined that this question overlapped an event in Scenario 4. Licensee replaced Question. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
75	F	3	x						x				x		N	U S	<p>G2.4.13</p> <ol style="list-style-type: none"> <li>1. Job-link: An RO applicant could successfully argue that this knowledge is beyond RO responsibilities and/or knowledge. Ask the licensee to provide an RO learning objective to substantiate that the RO is required to know who the SM is allowed to use for a backup verification of his E-plan classification. IF an RO specific learning objective doesn't exist, then discuss writing a different question.</li> <li>2. Q=K/A: The proposed test item tests the applicants' knowledge of roles and responsibilities during E-plan usage. The K/A requires testing the applicants' knowledge of roles and responsibilities during EOP usage.</li> <li>3. Stem Focus: Re-word the question as follows (to more closely align with the intent of the procedure and to clarify each choice so that there is only one correct answer.  <i>WOOTF identifies "who" the Shift Manager may use to perform a backup verification of the Emergency Action Level Classification (before officially making the classification) in accordance with 0-ADM-211, Emergency and Off-Normal Operating Procedure Usage?</i></li> </ol> <p>A. ONLY the Shift Technical Advisor                      B. ONLY the STA or Unit Supervisor                      C. ONLY the STA, US, or Communicator                      D. STA, US, Communicator, or Field Supervisor</p> <li>4. Licensee replaced question. Question is SAT.</li>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
76	H	3	x				x	x					x	N	E S	<p>007 EG2.4.34</p> <ol style="list-style-type: none"> <li>This question may overlap with RO Q#44. Discuss w/ licensee</li> <li>Job-link: Is using Section 5.10 to stop AFW in accordance with procedures? ES-0.1, Step 23 RNO says IF either QR50 or QR51 light is lit, THEN skip Step 23 and go to Step 24. Step 24 doesn't provide guidance to stop the AFW pumps. What's allowing the crew to stop AFW even though an auto-start signal exists and how is this permitted given the wording of Step 23 RNO? Is this a bus-stripping AFW auto-start signal?</li> <li>Stem Focus: Need to include the section and title for 3-NOP-075, i.e., Section 5.10, Shutdown of AFW Pump(s) From Emergency Plant Operation, in the stem. Which AFW pumps are running? This information may be required in order to match up with the procedure step 4.A, i.e., "if two AFW pumps are running in the same train, then shutdown the desired AFW pump (stopping the AFW pump using the T&amp;T valve, "C" is the preferred pump.)"</li> <li>Partial: Because the choices include the AFW pump letter designations, an applicant could successfully argue that there is more than one correct answer (or no correct answer) if he/she assumes that stopping either the "A" or "B" pump using the T&amp;T valve is also permitted.</li> <li>SRO-only: (borderline) RO knowledge with the pump becoming inoperable when the mechanical overspeed device is actuated. The other two pumps' operability can be determined using the systems information "above-the-line" in Table 3.7-3 when steam MOV breaker is opened. Suggest re-wording the stem question "neutrally" and target the SRO knowledge of Tech Spec required actions as follows:                     <p><i>"WOOTF identifies 1) whether the AFW Pumps can be stopped remotely from the control room and 2) whether a required action for Unit 4 will exist after all the pumps have been stopped in accordance with Tech Spec 3.7.1.2, Auxiliary Feedwater System?"</i></p> <ol style="list-style-type: none"> <li>The pumps can be stopped from the control room (no local operator actions are required); A required action on Unit 4 will exist to restore the inoperable AFW train to an operable status within 72 hours.</li> <li>The pumps can be stopped from the control room (no local operator actions are required); No required action statements for AFW will exist on Unit 4</li> <li>Stopping the pumps requires local operator action; No required action statements for AFW will exist on Unit 4</li> <li>Stopping the pumps requires local operator action; A required action on Unit 4 will exist to restore the inoperable train to an operable status within 72 hours.</li> </ol> </li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
76																76 continued... 6. Comments incorporated. Question is SAT.
77	H	2	x					x					x	N	U S	008AG2.4.18 1. SRO-only: RO knowledge associated with Red/Orange path entry conditions and rules of usage for yellow CSFSTs will allow the applicant to rule out "B" and "D." This elimination is acceptable in an SRO-only test item ONLY if the remaining choices "A" and "C" require SRO level knowledge of the EOP bases document(s). Knowing whether or not RCS pressure is above or below the RHR Pump shutoff head is RO knowledge even though it's listed in BD-EOP-E-1, Procedure Step 19. The reason you go to ES-1.2 is to get on RHR and this is RO knowledge of the procedure's overall mitigative strategy.  Suggest testing the SRO applicants' knowledge of the analysis findings listed in ES-1.2 background that says the RCS pressure drop (for a stuck open PORV) will be below the shutoff head of the RHR pumps <i>BEFORE</i> the RWST inventory reaches the swap-over requirement to CL Recirc.  2. Partial: An applicant can successfully argue that "C" is correct because the analysis document says that IF the cool down rate was significantly less than 100 deg/hr, THEN the switchover RWST level would be required before the RHR system could be placed in service.  3. Stem Focus: The CET temperatures are not provided in the stem; consequently, it's not possible to positively determine that a yellow path (FR-C.3) exists.  4. Stem Focus: The stem question should contain "in accordance with ..." [document name].  5. #/units: Change the 4 <sup>th</sup> bullet to "Subcooling based on CETs."  6. Licensee re-worked question to test procedure selection and basis for max charging. Question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
78	H	2	x										x		N	E S	<p>027 AG2.4.49</p> <p><u>Replace the K/A with the Chief Examiner.</u></p> <p>1. Q=K/A: This is a tough K/A to hit at the SRO level because immediate operator actions are RO knowledge.</p> <p>The apparent justification for this question is that the tech spec bases knowledge that a PORV is still operable if it is capable of being manually controlled, i.e., 0-ADM-536, Attachment 1, page 42 of 112.</p> <p>However, the knowledge of tech spec bases cannot be tied to the wording of the K/A because it's associated with the determination of whether or not the 1 hour action statement applies. In other words, "1 hour" does not qualify as "immediate."</p> <p>2. Stem Focus: The stem should reflect the exact position that the RO places the control switch and should also reflect that the PORV actually closed once the switch was placed to the Closed position. This is necessary to ensure that the operability determination can be clearly made.</p> <p>3. K/A was replaced with 027 AG2.4.45. New question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
79	H	2	x											N	E S	<p>056 AA2.43</p> <p>1. Stem Focus: Reword the stem question as follows:</p> <p><u>Initial Conditions:</u> Unit 3 was at 100 MW(e) during a plant startup Unit 4 was at 100% power</p> <p><u>Subsequently:</u> Unit 3 &amp; 4 were manually tripped due to a loss of the switchyard The 3A EDG locked out Both Unit 4 EDGs failed to start</p> <p>While performing Step 2 of E-0 ("Verify Turbine Trip"), the Unit 3 BOP operator observes the following indications:</p> <ul style="list-style-type: none"> <li>All Stop valves (#s) green lights illuminated and red lights extinguished</li> <li>Two Control valves (#s) green lights illuminated and red lights extinguished</li> <li>Two Control valves (#s) green lights EXTINGUISHED and red lights ILLUMINATED</li> </ul> <p>WOOTF identifies 1) whether the Response Not Obtained (RNO) column for E-0, Step 2 is required to be entered AND 2) whether ES-0.1, Rx Trip Response, Attachment 2, Reactor Trip Response with Minimum Required Equipment, is required to be entered on Unit 3?</p> <p>A. RNO column is required; Attachment 2 is NOT required on Unit 3</p> <p>B. <b>RNO column is NOT required; Attachment 2 is required on Unit 3</b></p> <p>C. RNO column is required; Attachment 2 is required on Unit 3</p> <p>D. RNO column is NOT required; Attachment 2 is NOT required on Unit 3</p> <p>2. Verify w/ the licensee that the RNO column is NOT required in accordance with the E-0 use and adherence procedures. Can an applicant also argue that "C" is permissible?</p> <p>3. Licensee incorporated comments. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
80	H	2	x			x							x	B	U S	<p>062 AA2.05</p> <ol style="list-style-type: none"> <li>SRO-only: The overall mitigative strategy of the ONOP for one ICW pump operation is to cut back ICW flow to the TPCW and CCW Heat Exchangers to achieve less than 18,500 gpm. If this flow rate cannot be achieved, then the ONOP strategy is to lower power to reduce heat load on the TPCW system. The SRO applicants can deduce the correct answer using RO knowledge of the procedure's overall mitigative strategy. The procedure selection portion of the question (E-0 versus GOP-103) is not being tested because the knowledge of the overall mitigative strategy can be used to deduce the correct answer. Additionally, maximum allowed ICW flowrate (18,500 gpm) during 1 pump operation is a procedure precaution and limitation (4-NOP-019, Section 2.2.2.4). Typically, precaution and limitation information related to system operation is RO knowledge. The reactor trip criteria (cannot maintain CCW &lt; 120 deg and bearing temperature &lt; 180) is RO knowledge.</li> <li>Cred Dist: The TPCW temperature (110 and steady), CCW temperature (110 and steady), and turbine bearing temperature (160 and steady) make choices "A" and "B" (tripping the reactor) not plausible because of the word "steady." In other words, why would I ever trip the reactor if everything is steady?</li> <li>Stem focus: The 4<sup>th</sup> bullet (<i>The crew enters 4-ONOP-019</i>) is not necessary to elicit the correct response. Suggest writing a question to test the applicants' knowledge of 1) the required action when an ICW pump has been operated &gt; 20 minutes at a flow rate &gt; 18,500 gpm [vibration and pump dP testing is required vs. pump must be immediately declared inoperable IAW TS 3.7.3 (wrong)] AND 2) the tech spec required action when the ICW/CCW strainer isolation valves have been closed for greater than 5 minutes [TS 3.0.3 entry required (vs. 72 hour LCO)]. Discuss possibility of providing a reference if this suggestion is used.</li> <li>Licensee incorporated suggestion. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
81	H	2											x	x	N	E S	065 AA2.01 <u>Replace the K/A with Chief Examiner.</u> 1. SRO-only and/or Q=K/A: This is a difficult question (determine and interpret the cause – effect of low pressure instrument air alarm) to hit at the SRO level. The SRO applicants can deduce the correct answer using RO knowledge of the procedure's overall mitigative strategy for pressurizer level control following a loss of instrument air. The word "interpret" could potentially be used to mean procedure selection; however, the proposed question does not present the SRO applicants with a procedure selection (or a tech spec selection). Instead, the question tests the applicants' knowledge of how Pzr level is required to be maintained if the instrument air to the Aux Bldg is isolated. (initiate SI or starting/stopping charging pumps). 2. K/A was replaced with 040 (W/E12) EA2.1. New question is SAT.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
82	F	2				x							x		U S	<p>024 AG2.1.32</p> <p>1. Cred Dist and/or SRO-only: The proposed question is testing the applicants' knowledge of 1) what Turkey Point procedure includes the steps for emergency borating [ONOP-046.1 vs ES-0.1] and 2) how long emergency boration must be performed [can only stop when time req't for uncontrolled cool down has elapsed <u>vs</u> can stop when either when the time req't for uncontrolled cool down has elapsed OR cold shutdown boron concentration has been achieved.]</p> <p>The flow rate and duration of the emergency boration is RO knowledge. Furthermore, emergency boration criteria <u>and</u> transition to the ONOP is also listed on ES-0.1 foldout page. Because RO's are expected to know AOP entry conditions, using ES-0.1 and NOT using ONOP-046.1 to emergency borate is not plausible. In other words, the ROs know "when" ONOP-046.1 is required to entered, including from within the EOP network.</p> <p>Suggest writing a question to test the SRO applicants' knowledge of Tech Spec 3.1.2.1, 3.1.2.2, 3.1.2.4, or 3.1.2.5 because this knowledge can be interpreted as a "system limit" and the action statement can be interpreted as "applying" the system limit.</p> <p>2. Licensee replaced question with one that tests the SRO applicants' knowledge of the max allowed boron solution temperature (RO) and the basis for the limit (SRO). Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
83	H	2	x				x						x	N	E S	<p>032 AG2.4.31</p> <ol style="list-style-type: none"> <li>SRO-only: (borderline) A way to target the 10CFR55.43(b)(5) procedure "selection" requirement is to write a question where the SRO applicant has to choose between two procedures. The proposed question is written to test the applicants' knowledge of what action is allowed by ONOP-059.5. (not procedure selection). RO's are responsible for knowing when reactivity changes are not allowed.</li> <li>Suggest writing a question to test the SRO's ability to determine which Tech Spec action is required following the loss of one SR detector, i.e., TS Table 3.3-1, Action 5 or Action 9 because Tech Specs is a "response procedure" following the loss of the SR detector.</li> <li>Stem Focus: In the 1<sup>st</sup> bullet, use the term Tavg is 547 deg instead of Unit 4 is 547 deg.</li> <li>Stem Focus: The last bullet (crew enters ONOP-059.5) is not necessary to elicit the correct response.</li> <li>Stem Focus: Shorten the 2<sup>nd</sup> part of each choice to The dilution may continue or The dilution may NOT continue.</li> <li>Partial: An applicant could potentially argue that there are two correct answers ("B" and "D") because the administrative reactivity management protocol may dictate that the crew stop the dilution while they attend to the ONOP-059.5 actions.</li> <li>Licensee wanted to provide a reference since the question is testing a TS action statement. Reference allowed since this is not a direct lookup. Comments incorporated. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
84	H	2	x										x	N	U S	<p>033 AA2.06</p> <ol style="list-style-type: none"> <li>SRO-only: The second portion of the proposed question only tests whether ONOP-059.7 is required to be entered or not. IF an applicant assumed (using RO knowledge) that it's never really "<i>wrong</i>" to enter the AOP, THEN he/she could reasonably guess the correct answer without having to know anything about the procedure. Additionally, the SRO clarification guidance document states that entry conditions to AOPs are RO knowledge.  The wording of the K/A (i.e., "determine and interpret") lends itself to testing the SRO applicants' ability to use tech specs and/or select procedures because this is part of "interpreting." Draft submittal package included TS 3.3.1 reference. Suggest writing the second portion of the question to test the SRO applicants' knowledge of the Tech Spec requirements and/or bases knowledge associated with TS 3.3.1. Discuss using a reference with the Chief Examiner. IF it's desired to target procedure selection to test the SRO, THEN write the question to present the applicant with a choice of two procedures (not ONOPs), possibly annunciator procedures.</li> <li>Partial: Unit 4 Cycle 25 Excore NIS Calibration Factors data sheet states: N-35 at 20% power should read 5.6 E-05 to 6.8 E-05. The stem states that at 20%, N-35 reads 7 X 10<sup>-4</sup> amps. Therefore, N-35 was mis-calibrated <u>high</u> by over an order of magnitude, and "A" and "C" are correct. The data sheet states that N-36 at 20% power should read 1.1E-04 to 1.3E-04. The stem states that at 20%, N-36 reads 7 X 10<sup>-5</sup> amps. Therefore N-36 was mis-calibrated <u>low</u> by an order of magnitude, and "B" and "D" are also correct. IF both N-35 and N-36 are mis-calibrated, THEN there is no technically correct answer.</li> <li>Stem Focus: The stem question should be plural, i.e., statements.</li> <li>Licensee reworked question to test SRO knowledge of max allowed power by using a Tech Spec reference. Comments incorporated. Question is not a direct lookup. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
85	H	3	x							x				B	E S	<p>051 AA2.02</p> <ol style="list-style-type: none"> <li><b>#/units:</b> The units for condenser vacuum (as they appear in the control room) should be included for the 21" value of vacuum, i.e., " Hg.</li> <li><b>Stem Focus:</b> The condenser vacuum value should also state that it is stable to add plausibility to the distracters.</li> <li><b>Stem Focus:</b> Re-word the stem question and choices as follows:   <i>Given these parameters, WOOTF identifies whether continued turbine operation is allowed in accordance with 3-ONOP-014, Main Condenser Loss of Vacuum, and the minimum required notifications in accordance with 0-ADM-115, Notification of Plant Events?</i> <ol style="list-style-type: none"> <li><i>Continued turbine operation is allowed; ONLY the Assistant Operations Manager (or designee) is required to be notified.</i></li> <li><i>Continued turbine operation is allowed; ALL of the plant management members are required to be notified.</i></li> <li><i>Continued turbine operation is NOT allowed: the NRC is required to be notified within 4 hours of the manual reactor trip.</i></li> <li><i>Continued turbine operation is NOT allowed; the NRC is required to be notified within 8 hours of the manual reactor trip.</i></li> </ol> </li> <li>Verify with the licensee that "D" (8 hour notification) is incorrect.</li> <li><b>Stem Focus:</b> Add the words "due to an unexpected" decreasing ...in the first bullet. This will align the situation with the ADM-115 reporting criteria.</li> <li>Suggestions incorporated. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
86	F	2	x			x								N	E S	<p>007 A2.03</p> <p>1. Cred Dist: "A" and "C" are not plausible since ONOP-41.5 is titled and developed for "controller" malfunctions. Recommend alternative choices as follows:</p> <p><i>A Pressurizer PORV is leaking on Unit 4.</i></p> <p><i>WOOTF identifies 1) the procedure that contains detailed steps for adjusting the PRT parameters and 2) the lowest PRT pressure which will cause the rupture discs to relieve to the containment atmosphere?</i></p> <p>A. 4-ARP-097.CR.A, Window 7-1, PRT HI/LO LEVEL HI PRESS/TEMP; 10 psig,</p> <p>B. 4-ARP-097.CR.A, Window 7-1, PRT HI/LO LEVEL HI PRESS/TEMP; 100 psig</p> <p>C. 4-NOP-041.3, Pressurizer Relief Tank; 10 psig,</p> <p>D. 4-NOP-041.3, Pressurizer Relief Tank; 100 psig,</p> <p>2. Stem Focus: The bullets listed in the stem are not necessary to elicit the correct answer</p> <p>3. Licensee requested K/A be replaced because the proposed question was not good enough because the normal operating procedure always has the detailed steps for adjusting PRT parameters, i.e., more than one correct answer.. Chief Examiner randomly selected 004 A2.19. New question (for new K/A) was developed and is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
87	H		x											N	E S	<p>008 A2.08</p> <p>Note to examiner: ES-401, Section D.2. (pg 6 of 33) says that if it is not possible to target both parts of the A2 K/A (i.e., predicting impact and using procedures) without expending an inordinate amount of resources, then limit the scope of the question to the (b) portion of the A.2 K/A statements (using procedures). Therefore the proposed question is an acceptable K/A match. Even though the proposed question doesn't predict the impact ON THE CCW system, the question does test the SRO applicants' ability to use procedures to correct, control, and mitigate the consequences of shutting the TCV-3-144.</p> <ol style="list-style-type: none"> <li>1. Stem Focus: The stem needs to include more specifics as to the alarms, component (TCV-3-144) indications, component numbers, etc. For example, the stem needs to provide all the annunciators alarming on Panel A (may need to run on the simulator to get alarm info). The stem must place the applicants' in a procedure. (ARP, ONOP, etc.) to be operationally valid. The 1<sup>st</sup> portion of the stem question ("the correct method for controlling TCV-3-144) needs to include the phrase "in accordance with..." whichever procedure is directing the action.</li> <li>2. Stem Focus: For reactor power at 99.90%, include where this indication was obtained and whether it is stable or continuing to lower.</li> <li>3. Stem Focus: The 1<sup>st</sup> part of the stem question ("correct" method for controlling TCV-3-144) should be worded in terms of which direction the controller lower/raise pushbutton is moved or which direction the valve is moved, i.e., open or close. Step 3 in the ARP says to place TC-3-TCC-144A in manual and first attempt to reduce letdown temperature. Is this being performed? If so, then test the applicants' ability to manipulate the controller in manual, including the direction to take the valve.</li> <li>4. Stem Focus: The explanation of the boron effects on power lists TCV-3-143 even though the question lists TCV-3-144. Provide Chief Examiner with the lesson plan diagram that shows which component has failed, including the direction of failure.</li> <li>5. Stem Focus: The wording of the 2<sup>nd</sup> part of the stem question must be tightly linked to the required steps listed in NAP-402, Attachment E. In other words: <i>WOOTF identifies the required classification for this reactivity issue when it is entered in the PI-AA-204 Condition Reporting Process?</i></li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
87																87 continued.... 6. Comments incorporated. Question is SAT.
88	H	4	x											N	E	<p>010 G2.2.40</p> <ol style="list-style-type: none"> <li>Stem Focus: The order of the bullets is confusing because logical sequence for the applicants to read the question is that the crew is initially cooling down the RCS due to pressure boundary leakage (i.e., 4<sup>th</sup> bullet should be the 1<sup>st</sup> bullet.)</li> <li>Stem Focus: The stem does not state whether the high pressure SI flow paths are isolated or not. This information is needed to allow the applicants to know where they are (initially) with respect to LCO 3.4.9.3 compliance and to add plausibility to the RCP racked out distractor.</li> <li>Stem Focus: Verify w/ the licensee that the initial condition is indeed "Mode 3" and that the question is testing the SRO applicants' knowledge of whether entry to Mode 4 (or lower) is allowed in accordance with TS 3.0.4 and TS 3.4.9.3 without using a reference. (may be too difficult and grounds for appeal)</li> <li>Stem Focus: The choices should be worded in terms of whether the cool down may (or may not) proceed. For example, re-word the stem as listed below:   <i>WOOTF identifies the required actions and/or limitations with cooling down the plant in accordance with Tech Specs?</i> <ol style="list-style-type: none"> <li>The cool down must be stopped before the average reactor coolant temperature reaches 350 deg</li> <li>The cool down may continue below 350 deg; however, it must be stopped before any cold leg temperature reaches 275 deg</li> <li>The cool down may continue to <math>\leq 200</math> deg average reactor coolant temperature ONLY if all RCP breakers are racked out before any cold leg temperature reaches 275 deg.</li> <li>The cool down may continue to <math>\leq 200</math> deg average reactor coolant temperature and the RCS must be vented though at least a 2.2 in<sup>2</sup> vent within 24 hours after any cold leg temperature reaches 275 deg</li> </ol> </li> </ol> <p>5. Comments incorporated. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
89	H	3	x	x										N	E	026 G2.4.47	<p>S</p> <ol style="list-style-type: none"> <li>1. Cues: The 3<sup>rd</sup> bullet (at 12:04) tells the applicant that the containment spray actuation set point was exceeded instead of providing the containment pressure and testing the applicants' knowledge of whether or not the containment spray actuation set point was exceeded or not.</li> <li>2. Cues: The 1<sup>st</sup> bullet (at 12:00) tells the applicant that a SI occurred due to a LOCA. Suggest providing the plant parameters and let the applicant infer that a SI actuation has (or has not) occurred due to an RCS leak.</li> <li>3. Stem Focus: The word "correct" is always implied for every written exam question and is not normally needed. In this question, the SRO applicant is required to classify the emergency in accordance with procedure requirements. Suggest using the phrase "of the following identifies highest required emergency classification" to avoid subset issues and eliminate the word "correct."</li> <li>4. Stem Focus: In the 2<sup>nd</sup> bullet, the word "commence" is not necessary. Suggest changing to "...the US directed the BOP operator to perform 3-EOP-E-0 Attachment 3...."</li> <li>5. Stem Focus: In the 5<sup>th</sup> bullet, how many CETs reached 800 deg F? The Fission Product Barrier Worksheet requires a minimum of 5 to indicate a potential loss of the fuel cladding.</li> <li>6. Stem Focus: Is the value of subcooling required? It appears that this value is required to use the Fission Product Barrier Worksheet to decide whether an actual loss of the RCS Barrier has occurred.</li> <li>7. Stem Focus: Delete the phrase "This event is a(n).." from the 2<sup>nd</sup> part of each choice.</li> <li>8. Is the RVLMS value of 0% necessary to elicit the correct answer?</li> <li>9. Comments incorporated. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
90	F	3	x			x								N	E S	<p>026 G2.4.47</p> <p>Note to examiner: ES-401, Section D.2. (pg 6 of 33) says that if it is not possible to target both parts of the A2 K/A (i.e., predicting impact and using procedures) without expending an inordinate amount of resources, then limit the scope of the question to the (b) portion of the A.2 K/A statements (using procedures). Therefore the proposed question is an acceptable K/A match. Even though the proposed question doesn't require the SRO applicant to PREDICT the impact of a failed detector on the PRM System, the question does test the SRO applicants' ability to use procedures to correct, control, and mitigate the consequences of the failed R-14.</p> <ol style="list-style-type: none"> <li>Ask the licensee whether they intend on distributing a reference for the applicants. If so, then this question may be a direct lookup. Every attempt should be made to write a closed book exam question.</li> <li>Stem Focus: Re-word the stem question as follows:   <p><i>"WOOTF identifies the minimum required action(s) to release a Gaseous Decay Tank when the R-14 Plant Vent Gaseous Monitor is inoperable in accordance with ODCM, Section 3.1, Radioactive Gaseous Effluent Monitoring Instrumentation?"</i></p> </li> <li>Cred Dist: "C" is not plausible because the decay tank release won't take more than 24 hours. Change the wording of the other distracters to clarify the required actions as follows: <ol style="list-style-type: none"> <li><i>The flow rate must be estimated at least once per 4 hours during the release.</i></li> <li><i>Auxiliary equipment must be installed AND the sample flow rate must be verified at least once per 4 hours during the release.</i></li> <li><i>(Not plausible because the decay tank release won't take 24 hours to complete – replace)</i></li> <li><i>At least 2 technically qualified members of the facility staff must each independently verify that the release rate calculations and the discharge valve lineup is correct before the release is started.</i></li> </ol> </li> <li>Licensee wanted to provide ODCM reference; however, this made the question a direct lookup. Instead. The action statement was converted into a fill-in-the-blank. Comments incorporated. Question is SAT.</li> </ol>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
91	H	2				x				x				N	E S	<p>011 A2.10</p> <p>1. Cred Dist: "D" is not plausible because IF charging pump speed remains the same, then there wouldn't be a "reason" to manually trip the reactor because none of the RPS Tech Specs have action statements to manually trip the reactor.</p> <p>Suggest testing the SRO applicants' knowledge of whether or not TS 3.0.3 is required., i.e., the 2<sup>nd</sup> part of the question can be TS 3.0.3 is required or TS 3.0.3 is NOT required.</p> <p>2. #/units: The switch label and position name should exactly match the actual control panel labeling. i.e., in the 4<sup>th</sup> bullet, use "Pressurizer Level Control Transfer Switch is in the Ch 2 &amp; 3 position"</p> <p>3. Licensee re-worked 2<sup>nd</sup> part of the question to test the SRO applicants' knowledge of whether already tripped bistables were permitted to be bypassed to allow performance of a surveillance test. A reference was provided to the applicants. The question is not a direct lookup. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
92	H	2	x			x							x		B	U S	<p>015 A2.05</p> <ol style="list-style-type: none"> <li>Cred Dist: "A" is not plausible because IF fission was increasing, THEN remaining in E-1 is not reasonable. Based on the RVLMS information provided in the stem, remaining in E-1 is not plausible, i.e., FR-I.3 is required. How is displacement of boron in the down comer region supposed to increase fission?</li> <li>Cred Dist: "D" is not plausible because IF neutron leakage were the cause of the rising count rate, THEN subcriticality is assured, i.e., FR-S.2 wouldn't be required.</li> <li>SRO-only: FR-S.2 is a yellow path and is not required. Since ROs are required to know red/orange paths, then the applicant can deduce that the yellow path is not correct.</li> <li>Stem Focus: The 3<sup>rd</sup> bullet ("<i>RVLMS indicates decreasing core level</i>") should include values (dynamic or static) indicative of core uncovering for the SRO applicants to evaluate.</li> </ol> <p>For the 1<sup>st</sup> part of the question, suggest writing the question to test the SRO applicants' ability to predict that NI indications (N-31, -32, -35, -36, PR, and/or Gamma Metrics) will rise (vs. lower) in response to RVLMS values provided in the stem. <u>However, this would not in itself be an SRO question.</u> May not be achievable to hit at the SRO level. Discuss w/ Chief Examiner.</p> <p>The licensee modified the question to test how voiding and shutdown margin are affected (based on NIS indications provided) and which procedure transition was required. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
93	H	2	x			x								N	U S	<p>029 G2.1.30</p> <ol style="list-style-type: none"> <li>1. Cred Dist: "A" and "C" are not plausible because the 2<sup>nd</sup> portion states that TS 3.0.3 is required. Because there are no other equipment problems in the stem, it isn't plausible that only one broken PCIV would necessitate a TS required plant shutdown.</li> <li>2. Does the wording of the K/A lend itself to testing Tech Specs in order to make it SRO? (maybe)</li> <li>3. When testing Tech Spec knowledge beyond 1 hour or less action statements, a reference should normally be provided. Is there a specific learning objective requiring memorization of PCIV 4 hour action statements? If the reference is provided, the question must not become a direct lookup.</li> <li>4. Need 3-SMI-051.07 to read about 18 month surveillance for plausibility of "C" and "D", i.e., mechanical stop to prevent opening. May need to strengthen the wording of the 1<sup>st</sup> parts of "C" and "D" to closely align to the wording in 3-SMI-051.07</li> <li>5. Stem Focus: the words "monthly channel check" may be more appropriately moved to the 2<sup>nd</sup> bullet. Consider re-wording the stem question as follows:  <i>WOOTF identifies:</i> <ol style="list-style-type: none"> <li>1) how the POV-3-2602, Containment Purge Supply Isolation (OC), is verified to be in its required position and</li> <li>2) the required action(s) if POV-3-2602 is NOT in its required position in accordance with TS 3.6.1.??</li> </ol> </li> </ol> <p>Licensee re-worked question to test whether PM approval was required to perform a purge and what action was required to energize the purge valves. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
94	F	1				x								N	E S	<p>G2.1.38</p> <p>1. Cred Dist: "A" and "B" are not plausible because the 2<sup>nd</sup> bullet states (in bold) that the step has NOT been previously read. An applicant can reasonably "guess" that paraphrasing is not as conservative as reading verbatim. Additionally, since the stem question uses the word "required", then the choices associated with paraphrasing are not plausible.</p> <p>Suggest the following (from page 13 of 0-ADM-211):</p> <p><i>The Shift Manager is the Site Emergency Coordinator and has just determined the Emergency Action Level and is ready to communicate this information and the upgrade criteria to the control room crew.</i></p> <p><i>WOOTF is the required communication protocol, including its approximate length, in accordance with 0-ADM-211, Emergency and Off Normal Operating Procedure Usage?</i></p> <p><b>A. Update; 30 seconds</b>  <b>B. Update; 1 to 3 minutes</b>  <b>C. Brief; 30 seconds</b>  <b>D. Brief; 1 to 3 minutes</b></p> <p>Licensee incorporated suggestion. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
95	H	2	x										x	x	M	E S	<p>G2.2.1</p> <ol style="list-style-type: none"> <li>SRO-only: Ask the licensee to explain how the knowledge being tested is different from what the RO needs to know when performing a startup. [The RO needs to know <u>when</u> to stop the startup based on differences between the projected criticality and estimated critical condition and the RO also needs to know the <u>allowable SUR</u> (choices "A" and "B").] Since the correct answer ("B") doesn't involve knowing whose approval is required, then this question is only testing RO knowledge.</li> <li>Q=K/A: The proposed question is testing the applicants' ability to perform <u>startup</u> procedures, but the K/A statement requires testing the applicants' ability to perform PRE-startup procedures. This can be accommodated as described below:  Suggest writing the question slightly different to test the SRO applicants' knowledge of some aspect of the SRO approval process for an ECC presented by Rx Engr'g (in OSP-040.4) <u>before</u> the startup commences and also test whose permission is required to continue the startup if the projected criticality and ECC differ by 300 pcm, but less than 400 pcm.</li> <li>Stem Focus: The 2<sup>nd</sup> bullet should be worded to ensure the word "different" is clearly understood by the applicants. Suggest the following:  <i>"After the third doubling, the projected point of criticality (from the 1/M plot) is 180 pcm different than the predicted ECC rod height."</i></li> </ol> <p>Licensee incorporated recommendation. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
96	F	1													E S	<p>G2.2.17</p> <p>1. LOD = 1: Because "A", "B", and "C" are all associated with safety related equipment, the obvious choice is "D." As written, this question will offer no discriminatory value on the exam.</p> <p>Suggest re-writing the choices to be more balanced, i.e., not all safety related equipment.</p> <p>Alternatively, suggest testing the SRO applicants' knowledge of 1) what's required if a tool pouch activity is started but can't be completed within the shift [work request must identify the deficiency vs. can continue the next shift (wrong)] and what procedure governs the use of tool pouch maintenance [0-ADM-701 vs another plausible procedure].</p> <p>Licensee subsequently modified the choices to not all be safety related equipment, and be more representative of the 0-ADM-701 requirements.. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
97	F	2					x							N	E S	<p>G2.3.12</p> <ol style="list-style-type: none"> <li>1. Partial: It appears that the wrong answer is checked on the question, i.e., "A" appears to be the correct answer instead of "B."</li> <li>2. Partial: The words in the procedure [Item 4.2.2.A "<i>Determine whether a containment purge is required. Requests to purge containment should be considered for approval when the work duration exceeds one hour.</i>"] are confusing. Does this wording imply that when the maintenance worker requests a containment purge for a job that takes 15 minutes that the SRO should NOT consider granting permission for the purge? Additionally, the phrase "<i>considered for approval</i>" is vague because it's fairly subjective what "considered" means. Does this mean that the SRO is required to approve the purge? Or does he only have to "consider" approving the purge? Because of the wording in the procedure, an applicant could potentially argue that both 1<sup>st</sup> parts of the question could be correct.</li> </ol> <p>Suggest testing 1) which two people are required to conduct the Attachment 2 Containment Entry Brief [Rad Protection Supervisor and SRO OR Safety Supervisor and SRO] and 2) what the focus of the SRO's brief is required to be [Confined Space Entry Requirements OR ensuring equipment, tools, materials are removed to preclude restriction of the RHR pump suction during a LOCA.]</p> <p>Licensee incorporated suggestion. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
98	F	2				x								N	U S	<p>G2.3.14</p> <ol style="list-style-type: none"> <li>Anytime that action statements greater than 1 hour are tested, we should provide a reference, while ensuring the question is not a direct lookup. The proposed question tests applicants memorization of action statements beyond 1 hours without providing a reference. This can become grounds for an appeal.</li> <li>Cred Dist: "C" and "D" are not plausible because 54 hours is a significantly long period of time to allow reactor operation with failed fuel of the magnitude listed in the stem and because no basis for this amount of time was included with the proposed question. An applicant could conservatively "guess" that 6 hours is the required action statement when compared to 54 hours.</li> <li>Partial: Since a SGTR can also be considered as a "LOCA outside of containment", then "A" and "B" can be argued as correct.</li> </ol> <p>Suggest testing the applicants' knowledge of the dose equivalent I-131 values during normal and accident conditions as follows:</p> <p><i>The Tech Spec 3.4.8 Limiting Condition for Operation for dose equivalent I-131 in the reactor coolant is _____.</i></p> <p><i>During an emergency, in order to declare an ACTUAL LOSS of the fuel clad barrier, the dose equivalent I-131 in the reactor coolant must be at least _____ in accordance with 0-EPIP-20101, Fission Product Barrier Table Worksheet.</i></p> <ol style="list-style-type: none"> <li>1 <math>\mu\text{Ci/gm}</math>; 300 <math>\mu\text{Ci/gm}</math></li> <li>100/E-bar <math>\mu\text{Ci/gm}</math>; 500 <math>\mu\text{Ci/gm}</math></li> <li>1 <math>\mu\text{Ci/gm}</math>; 500 <math>\mu\text{Ci/gm}</math></li> <li>100/E-bar <math>\mu\text{Ci/gm}</math>; 300 <math>\mu\text{Ci/gm}</math></li> </ol> <p>Licensee incorporated suggestion. Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
99	H	3				x								N	E S	<p>G2.4.32</p> <p>1. Cred Dist: "C" and "D" are not plausible for two reasons:</p> <p>1) the overall mitigative strategy (RO knowledge) for losing annunciators is to not disturb the plant, i.e., avoid a transient. "C" and "D" don't make common sense because if you've lost alarm capability you shouldn't intentionally cause a lot of annunciators to alarm.</p> <p>2) the question doesn't require the applicants to interpret whether a loss of DC Bus 3D01 because there are no DC busses listed in the stem. IF the intent was to list those components normally affected by a loss of 3D01 (feed flow unaffected, steam flow unaffected, etc.) to add plausibility to the manual scram requirement, it doesn't work because nothing is affected, i.e., MSIVs remain open, reactor/turbine does not trip, feed &amp; steam flow not changed.</p> <p>Suggest keeping the 2<sup>nd</sup> portion of the question (NRC and State Warning Point notification) but testing another aspect of 3-ONOP-097.CR, Loss of CR Annunciators or NRC notification time requirement of 8 hours.</p> <p>2. 3-ONOP-097.CR, Loss of Control Room Annunciators was not included in the reference material CDs. Provide procedure.</p> <p>Licensee kept the 2<sup>nd</sup> portion (as suggested) and incorporated a new part to test the SRO applicants' knowledge of the E-plan classification requirement (with no reference.) Question is SAT.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
100	H	2	x	x										B	E S	<p>G2.4.4</p> <ol style="list-style-type: none"> <li>1. Cues: The alarm setpoint (4-ARP-097.CR, Window H 6/5) is 155,000 gallons. Consequently, the 3<sup>rd</sup> bullet is not necessary to elicit the correct answer. If a trend is desired, then state that the RWST level is slowly lowering.</li> <li>2. Cues: The 3<sup>rd</sup> bullet tells the applicant that a procedure transition was required when RWST level decreased below 155,000 gallons. (applicants should know that the crew has transitioned to CL recirc procedure when RWST Lo Level alarm was received.</li> </ol> <p>Suggest deleting the 3<sup>rd</sup> and 4<sup>th</sup> bullet (put the RCS and containment parameters in the STA report section) and asking the following question:</p> <p><i>WOOTF identifies the required procedure?</i></p> <ol style="list-style-type: none"> <li>A. <i>Immediately transition to 4-EOP-FR-C.2</i></li> <li>B. <i>Immediately transition to 4-EOP-FR-H.1</i></li> <li>C. <i>Immediately transition to E-1</i></li> <li>D. <i>Immediately transition to ES-1.3</i></li> </ol> <ol style="list-style-type: none"> <li>3. Stem Focus: The containment parameters provided in the stem should include a value and trend. The CETs should also include a trend.</li> </ol> <p>Licensee incorporated suggestion. Question is SAT.</p>

Facility: <b>Turkey Point</b>		Date of Exam: <b>11/10/10</b>	Exam Level: RO <input checked="" type="checkbox"/>	SRO <input checked="" type="checkbox"/>
Item Description	Initials			
	a	b	c	
1. Clean answer sheets copied before grading	MJR	N/A	<i>[Signature]</i>	
2. Answer key changes and question deletions justified and documented	MJR		<i>[Signature]</i>	
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	N/A		<i>[Signature]</i>	
4. Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail	N/A		<i>[Signature]</i>	
5. All other failing examinations checked to ensure that grades are justified	N/A		N/A	
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	MJR		<i>[Signature]</i>	
Printed Name/Signature		Date		
a. Grader	<u>MARK J. RICHES / Mark J. Riches</u>		<u>10-18-2010</u>	
b. Facility Reviewer(*)	<u>N/A</u>		<u>N/A</u>	
c. NRC Chief Examiner (*)	<u>GERARD W. LASKA / <i>[Signature]</i></u>		<u>10/18/2010</u>	
d. NRC Supervisor (*)	<u>WILCOULT. WIDMANN / <i>[Signature]</i></u>		<u>10/18/10</u>	
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.				