

Facility: <u>2016-301 Turkey Point</u>		Date of Examination: <u>8/22/16</u>
Developed by: Written: Facility <input checked="" type="checkbox"/> NRC <input type="checkbox"/> // Operating Facility <input checked="" type="checkbox"/> NRC <input type="checkbox"/>		
Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	<i>PGE</i>
-150	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	<i>PGE</i>
-150	3. Facility contact briefed on security and other requirements (C.2.c)	<i>PGE</i>
-150	4. Corporate notification letter sent (C.2.d)	<i>PGE</i>
[-120]	5. Reference material due (C.1.e; C.3.c; Attachment 3)	<i>PGE</i>
{-90}	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, ES-401-1/2, ES-401N-1/2, ES-401-3, ES-401N-3, ES-401-4, and ES-401N-4, as applicable (C.1.e and f; C.3.d)	<i>PGE</i>
{-85}	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	<i>PGE</i>
{-60}	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, ES-401N-6, and any Form ES-201-2, ES-201-3, ES-301-1, or ES-301-2 updates), and reference materials due (C.1.e, f, g and h; C.3.d)	<i>PGE</i>
-45	9. Written exam and operating test reviews completed. (C.3.f)	<i>PGE</i>
-30	10. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	<i>PGE</i>
-21	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	<i>PGE</i>
-21	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	<i>PGE</i>
-14	13. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	<i>PGE</i>
-14	14. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	<i>PGE</i>
-7	15. Facility licensee management queried regarding the licensee's views on the examination. (C.2.j)	<i>PGE</i>
-7	16. 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)	<i>PGE</i>
-7	17. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	<i>PGE</i>
-7	18. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	<i>PGE</i>
<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.</p> <p>[Applies only] {Does not apply} to examinations prepared by the NRC.</p>		

L-16-1 NRC EXAM SECURE INFORMATION

ES-201

Examination Outline Quality Checklist

Form ES-201-2

Facility: <u>Turkey Point Units 3&4</u>		Date of Examination: <u>8/22/16</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 or ES-401N.	M	CB	AK
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 or ES-401N and whether all K/A categories are appropriately sampled.	M	CB	AK
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	M	CB	AK
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	M	CB	AK
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.	M	CB	AK
	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.	M	CB	AK
	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.	M	CB	AK
3. W A L K T H R O U G H	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.	M	CB	AK
	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	M	CB	AK
	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.	M	CB	AK
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.	M	CB	AK
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	M	CB	AK
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	M	CB	AK
	d. Check for duplication and overlap among exam sections.	M	CB	AK
	e. Check the entire exam for balance of coverage.	M	CB	AK
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	M	CB	AK
<div style="display: flex; justify-content: space-between;"> <div> <p>a. Author <u>Mark Wilson</u></p> <p>b. Facility Reviewer (*) <u>SEAN Bloom</u></p> <p>c. NRC Chief Examiner (#) <u>Phillip G. Caphart</u></p> <p>d. NRC Supervisor <u>Gerald J. McCay</u></p> </div> <div style="text-align: right;"> <p>Printed Name/Signature</p> <p><u>Mark Wilson</u></p> <p><u>SEAN Bloom</u></p> <p><u>Phillip G. Caphart</u></p> <p><u>Gerald J. McCay</u></p> </div> <div style="text-align: right;"> <p>Date</p> <p><u>8/23/16</u></p> <p><u>8/15/16</u></p> <p><u>8/17/16</u></p> <p><u>8/17/16</u></p> </div> </div>				
<p>Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines.</p>				



MASTER SECURITY AGREEMENT

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The Master Security Agreement is used for those personnel having both knowledge of and unrestricted access to Exam Sensitive Material.

1. Pre-Examination (Review TR-AA-220-1002, Attachment 1 for pre-job briefing requirements)

I acknowledge that I have acquired specialized knowledge about the 2016 LOIT (L-16-1) NRC Examination scheduled for the date(s) of 8/22/2016 – 9/2/2016 as of the date of my signature. I agree that I will not knowingly divulge any information about this examination to any persons who have not been authorized by the Exam Project Manager. I understand that I am not to instruct or provide performance feedback to those individuals scheduled to be administered this examination from this date until completion of examination administration. I also understand that I am not to evaluate individuals scheduled to be administered this examination from this date until the date of administration. Acting as a simulator booth operator or communicator is acceptable if I do not select the training content or provide direct or indirect feedback to an examinee. Furthermore, I am aware of the physical security measures and requirements (as documented in procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examination and/or an enforcement action against my facility or me. I will immediately report to the Exam Project Manager any indications or suggestions that examination security may have been compromised.

Furthermore, I agree to **NOT** discuss any aspects associated with the contents of this examination with **ANY** examinee until completion of their examination administration. I further understand that violation of the conditions of this agreement may result in cancellation of the examination and/or enforcement action against the facility licensee or me.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the examination administered during the date(s) of 8/22/2016 – 9/2/2016. From the date that I entered into this security agreement until completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those individuals who were administered this examination.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
Alan Schilk	Developer	[Signature]	2/5/16	[Signature]	9/2/16	
Brian Clark	Developer	[Signature]	2/5/16	[Signature]	9/6/16	
Mark Wilson	Exam Project Manager	[Signature]	2/5/16	[Signature]	9/2/16	
Michael Murphy	EPDS	[Signature]	2/16/16	[Signature]	9/2/16	
Luis Sagon	Developer	[Signature]	2/16/16	[Signature]	9/2/16	
Joseph Arsenault	DEVELOPER	Sig on file	2/18/16	[Signature]	9/6/16	Signed via Telegram




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5/23/16

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
7. <u>TRAVIS OURET</u>	<u>FUZZT OPS TRN MGR</u>	<u>[Signature]</u>	<u>2/23/16</u>	<u>[Signature]</u>	<u>9/6/16</u>	
8. <u>SEAN WYLLIE</u>	<u>PSL EXAM AUTHOR</u>	<u>ON FILE</u>	<u>2/24/16</u>	<u>[Signature]</u>	<u>9/6/16</u>	
9. <u>EMMANUEL RESCH</u>	<u>SIM SUPPORT</u>	<u>[Signature]</u>	<u>3/21/16</u>	<u>E. RESCH</u>	<u>9/6/16</u>	
10. <u>FRANK LEON</u>	<u>SIM SUPPORT</u>	<u>[Signature]</u>	<u>3-21-16</u>	<u>[Signature]</u>	<u>9/7/16</u>	
11. <u>TOM WENDELN</u>	<u>SIM SUPPORT</u>	<u>[Signature]</u>	<u>3-21-16</u>	<u>TOM WENDELN</u>	<u>9/6/16</u>	
12. <u>George Moyssid</u>	<u>SIM Support</u>	<u>[Signature]</u>	<u>3-21-16</u>	<u>George Moyssid</u>	<u>9/7/16</u>	
13. <u>Adalberto Gonzalez</u>	<u>FIN BRO - Unit Supervisor</u>	<u>[Signature]</u>	<u>5-10-16</u>	<u>A. Gonzalez</u>	<u>9/6/16</u>	
14. <u>MICHAEL COEN</u>	<u>SHIFT MANAGER</u>	<u>[Signature]</u>	<u>5/10/16</u>	<u>[Signature]</u>		
15. <u>Jay Van Hoken</u>	<u>SRO - Unit Supv.</u>	<u>[Signature]</u>	<u>5-10-16</u>	<u>[Signature]</u>		
16. <u>CHRISTOPHER J MACHADO</u>	<u>RLO</u>	<u>[Signature]</u>	<u>5-10-16</u>	<u>[Signature]</u>	<u>9/19/16</u>	
17. <u>FIM GARDERH</u>	<u>SRO - O.U.</u>	<u>[Signature]</u>	<u>5/10/16</u>	<u>[Signature]</u>	<u>9/19/16</u>	
18. <u>HOSEACK</u>	<u>RLO</u>	<u>[Signature]</u>	<u>5/10/16</u>	<u>[Signature]</u>	<u>10/31/16</u>	
19. <u>Fobbe</u>	<u>RLO</u>	<u>[Signature]</u>	<u>5/10/16</u>	<u>[Signature]</u>		
20. <u>GO TREMBURY</u>	<u>CRS</u>	<u>[Signature]</u>	<u>5/16/16</u>	<u>E. TREMBURY</u>	<u>9/6/16</u>	

NOTES: ① signed off on pg. 2A.

		MASTER SECURITY AGREEMENT				
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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
7. <u>Travis Omet</u>	<u>First Ops New Mex</u>	<u>[Signature]</u>	<u>2/23/16</u>	<u>1.</u>		
8. <u>Sean Wylie</u>	<u>PSL Exam Answer</u>	<u>ON FILE</u>	<u>2/24/16</u>	<u>1.</u>		
9. <u>Emmanuel Resch</u>	<u>SIM SUPPORT</u>	<u>[Signature]</u>	<u>3/21/16</u>	<u>1.</u>		
10. <u>Frank Leon</u>	<u>SIM SUPPORT</u>	<u>[Signature]</u>	<u>3-21-16</u>	<u>1.</u>		
11. <u>Tom Wendeln</u>	<u>SIM SUPPORT</u>	<u>[Signature]</u>	<u>3-21-16</u>	<u>1.</u>		
12. <u>George Moyssin</u>	<u>SIM SUPPORT</u>	<u>[Signature]</u>	<u>3-21-16</u>	<u>1.</u>		
13. <u>Adrian Brasake</u>	<u>PN BRO - Unit Supervisor</u>	<u>[Signature]</u>	<u>5-10-16</u>	<u>[Signature]</u>	<u>9/7/16</u>	
14. <u>Michael Coen</u>	<u>Shift Manager</u>	<u>[Signature]</u>	<u>5-10-16</u>	<u>[Signature]</u>	<u>9/10/16</u>	
15. <u>Jay Van Hunker</u>	<u>SRO - Unit Supv.</u>	<u>[Signature]</u>	<u>5-10-16</u>	<u>[Signature]</u>	<u>9/16/16</u>	
16. <u>Christopher J Machado</u>	<u>RCO</u>	<u>[Signature]</u>	<u>5-10-16</u>	<u>1.</u>		
17. <u>Jim Goedrich</u>	<u>SRO - B.U.</u>	<u>[Signature]</u>	<u>5-10-16</u>	<u>[Signature]</u>	<u>9/7/16</u>	
18. <u>HO SACK</u>	<u>RO</u>	<u>[Signature]</u>	<u>5/16/16</u>	<u>[Signature]</u>	<u>9-8-16</u>	
19. <u>Fobbe</u>	<u>RCO</u>	<u>[Signature]</u>	<u>5/16/16</u>	<u>[Signature]</u>	<u>9-8-16</u>	
20. <u>GO TREMBLAY</u>	<u>CAS</u>	<u>[Signature]</u>	<u>5/16/16</u>	<u>1.</u>		

NOTES:

1. Signed on page 2



MASTER SECURITY AGREEMENT

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
21. <u>Nancy Heals</u>	<u>CRS-SRO</u>	<u>[Signature]</u>	<u>5/16/16</u>	<u>(2)</u>		
22. <u>Tim Hodge</u>	<u>Developer</u>	<u>[Signature]</u>	<u>5/20/16</u>	<u>[Signature]</u>	<u>9/6/16</u>	
23. <u>Ron Aiello</u>	<u>CONTRACTOR</u>	<u>ON FILE</u>	<u>5/31/16</u>	<u>Ron Aiello</u> <u>Signed via TELECOM</u>	<u>9/7/16</u>	
24. <u>RUSSELL JORLIN</u>	<u>EXTERNAL PEER</u>	<u>ON FILE</u>	<u>5/31/16</u>	<u>RUSSELL JORLIN</u> <u>Signed via TELECOM</u>	<u>9/6/16</u>	
25. <u>SHAUN MATTHEWS</u>	<u>REACTOR OPERATOR</u>	<u>[Signature]</u>	<u>6-6-16</u>	<u>(2)</u>		
26. <u>Ricky Schoenhals</u>	<u>CRS-SRO</u>	<u>[Signature]</u>	<u>6/6/16</u>	<u>(2)</u>		
27. <u>John Harrigan</u>	<u>SRO</u>	<u>[Signature]</u>	<u>6-8-16</u>	<u>[Signature]</u>	<u>10-5-16</u>	
28. <u>S. CHOI</u>	<u>RCO</u>	<u>[Signature]</u>	<u>6/9/16</u>	<u>S. Choi</u> <u>Signed via TELECOM</u>		
29. <u>Bill Busha</u>	<u>Sim Tec</u>	<u>[Signature]</u>	<u>6/10/16</u>	<u>[Signature]</u>	<u>9/14/16</u>	
30. <u>William Burtons</u>	<u>CRS-SRO</u>	<u>[Signature]</u>	<u>6/13/16</u>	<u>[Signature]</u>	<u>9/19/16</u>	
31. <u>Richard Tucker</u>	<u>SM-SRO</u>	<u>[Signature]</u>	<u>6/16/16</u>	<u>[Signature]</u>	<u>9/19/16</u>	
32. <u>G.W. BORG</u>	<u>S.P.O. BARRISTER</u>	<u>[Signature]</u>	<u>6/16/16</u>	<u>[Signature]</u>	<u>9/19/16</u>	
33. <u>M.A. SLAWINSKI</u>	<u>OPS INSTRUCTOR</u>	<u>[Signature]</u>	<u>6/20/16</u>	<u>[Signature]</u>	<u>9/19/16</u>	
34. <u>[Signature]</u>	<u>OPS - SRO-SRO</u>	<u>[Signature]</u>	<u>6-20-16</u>	<u>(2)</u>	<u>4/7/16</u>	
35. <u>Grant Melin</u>	<u>Ops - Admin Shift</u>	<u>[Signature]</u>	<u>06/21/16</u>	<u>(1)</u>		

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(1) TRANSFERRED TO PAGE 4.

(2) Signed off on pg 3A.



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3A

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
21. Nancy H. Seals	CRS - SRO	<i>[Signature]</i>	5/16/16	<i>[Signature]</i>	9/8/16	
22. Tim Hodge	Developer	<i>[Signature]</i>	5/20/16	<i>[Signature]</i>	9/16/16	
23. Ron Aiello	CONTRACTOR	ON FILE	5/31/16	2.		
24. RUSSELL JOPLIN	EXTERNAL PEER	ON FILE	5/31/16	2.		
25. SHAUN MATTHEWS	REACTOR OPERATOR	<i>[Signature]</i>	6-6-16	<i>[Signature]</i>	9-7-16	
26. Rocky Schoenbals	CRS - SRO	<i>[Signature]</i>	6/6/16	<i>[Signature]</i>	9/10/16	
27. John Harrigan	SRO	<i>[Signature]</i>	6-8-16	<i>[Signature]</i>	9-9-16	
28. S. Choi	RCO	<i>[Signature]</i>	6/9/16	2.		
29. Bill Busha	Sim Tec	<i>[Signature]</i>	6/10/16	2.		
30. William Burtons	CRS - SRO	<i>[Signature]</i>	6/13/16	2.		
31. Richard Tuxen	SM - SRO	<i>[Signature]</i>	6/16/16	2.		
32. G.W. Bross	S.P.O. BARBARIAN	<i>[Signature]</i>	6/16/16	2.		
33. M.A. SLAWINSKI	OPS INSTRUCTION	<i>[Signature]</i>	6/20/16	2.		
34. D. Amaker	OPS - SRO - BU	<i>[Signature]</i>	6-20-16	<i>[Signature]</i>	9-8-16	
35. Garret Melin	OPS - ADM GIFT	<i>[Signature]</i>	06/21/16	<i>[Signature]</i>	9/10/16	

NOTES:

1. TRANSFERRED TO PAGE 4
2. Signed on page 3

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
35. Ernest Nelson	AM. Shift	<i>[Signature]</i>	06/21/16	①		
36. Pablo Pasteris	RCO	<i>[Signature]</i>	7-25/16	①		
37. E. Social	OPN TRAINING	<i>[Signature]</i>	8/1/16	SOLIAS SIGNED VIA TELECOM	9/6/16	
38. H. Kwan	RCO	<i>[Signature]</i>	8/2/16	H. Kwan	9/3/16	
39. S. Bloom	SHIFT MANAGER	<i>[Signature]</i>	8/2/16	S. Bloom	9/3/16	
40. A. Choniat	Unit Supervisor	<i>[Signature]</i>	8/2/16	A. Choniat SIGNED VIA TELECOM	9/6/16	
41. Tim Jones	Shift Manager	<i>[Signature]</i>	8/2/16	①		
42. Paul Reimers	Unit Supervisor	<i>[Signature]</i>	8-12-16	Paul	9-14-16	
43. Keith Maestas	Shift Manager SM	<i>[Signature]</i>	8/12/16	K. MAESTAS SIGNED VIA TELECOM	9/6/16	
44. Christopher Trent	UNIT SUPERVISOR	<i>[Signature]</i>	8/12/16	①		
45. Steve Miranda	Shift Manager	<i>[Signature]</i>	8/12/16	<i>[Signature]</i>		
46. Jesse Enrique	RCO	<i>[Signature]</i>	8/12/16	<i>[Signature]</i>		
47. Tessa Callahan	Admin	<i>[Signature]</i>	8/15/16	Tessa Callahan	9/14/16	
48. John Haerle	Simulator Contractor	<i>[Signature]</i>	8/18/16	John Haerle	9/13/16	

NOTES: ① Signed off on pg 4A.

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
35. <u>Grant Nelson</u>	<u>RCO</u>	<u>[Signature]</u>	<u>8/21/16</u>	<u>[Signature]</u>	<u>9/8/16</u>	
36. <u>Paul Peters</u>	<u>RCO</u>	<u>[Signature]</u>	<u>7-25/16</u>	<u>[Signature]</u>	<u>9-8-16</u>	
37. <u>E. Social</u>	<u>OPR TRAINING</u>	<u>[Signature]</u>	<u>8/1/16</u>	<u>1.</u>		
38. <u>H. Kwan</u>	<u>RCO</u>	<u>[Signature]</u>	<u>8/2/16</u>	<u>1.</u>		
39. <u>S. Bloom</u>	<u>SHIFT MANAGER</u>	<u>[Signature]</u>	<u>8/2/16</u>	<u>[Signature]</u>	<u>9/20/16</u>	
40. <u>A. Chonot</u>	<u>Unit Supervisor</u>	<u>[Signature]</u>	<u>8/2/16</u>	<u>1.</u>		
41. <u>Tim Souze</u>	<u>Shift Manager</u>	<u>[Signature]</u>	<u>8/2/16</u>	<u>[Signature]</u>	<u>9/12/16</u>	
42. <u>Paul Reimers</u>	<u>Unit Supervisor</u>	<u>[Signature]</u>	<u>8-12-16</u>	<u>1.</u>		
43. <u>KEITH MASTERS</u>	<u>UNIT SUPERVISOR</u>	<u>[Signature]</u>	<u>8/12/16</u>	<u>[Signature]</u>	<u>9/1/16</u>	
44. <u>CHRISTOPHER TRANT</u>	<u>UNIT SUPERVISOR</u>	<u>[Signature]</u>	<u>8/12/16</u>	<u>[Signature]</u>	<u>9/1/16</u>	
45. <u>Steve Murano</u>	<u>Shift Manager</u>	<u>[Signature]</u>	<u>8/12/16</u>	<u>1.</u>		
46. <u>Jesse Enryge</u>	<u>RCO</u>	<u>[Signature]</u>	<u>8/12/16</u>	<u>1.</u>		
47. <u>Tessa Callahan</u>	<u>Admin</u>	<u>[Signature]</u>	<u>8/15/16</u>	<u>1.</u>		
48. <u>John Haeckle</u>	<u>Simulation Contractor</u>	<u>[Signature]</u>	<u>8/18/16</u>	<u>1.</u>		

NOTES:

1. Signed on page 4



MASTER SECURITY AGREEMENT

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
49. MUKLAUSICH, VAIL	Supervisor / Supervisor		8/22/16		9/6/16	
50. C.A. FORDMAN	INST / SED		8/22/16		9/6/16	
51. J. R. Russell	INST / SED		8/22/16		9/6/16	
52. F. S. Welch	Inst / Seq		8/22/16		9/6/16	
53. E. Neri	ADM-Training		8/29/16		9/7/16	
54. OSCAR ARAGON	SIMULATOR OPERATOR		8/24/16		9/6/16	
55. RS HESS	SCM		8/24/16		9/14/16	
56. J. R. Russell	INST / SED		8/25/16		9/6/16	
57. Joe Gronfridda	Ops Instructor / Supervisor		9/1/16		9/7/16	
58. Ronald Tripplett	Instructor		9/1/16		9/7/16	
59. JEFF MOELLER	INSTRUCTOR		9/1/16		9/7/16	
60.						
61.						
62.						

NOTES:

ES-301

Administrative Topics Outline

Form ES-301-1

Facility: **Turkey Point Units 3 & 4**Date of Examination: **08/22/2016**Examination Level: **RO** ☒ **SRO** ☐Operating Test Number: **2016-301**

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	R, M	Calculate a Manual Makeup to the VCT 2.1.25 (3.9): Ability to interpret reference materials, such as graphs, curves, tables, etc.
Conduct of Operations	R, D	Determine Heatup of the RCS 2.1.20 (4.6): Ability to interpret and execute procedure steps.
Equipment Control	R, N	Review an ECO for the 3A Heater Drain Pump 2.2.13 (4.1): Knowledge of tagging and clearance procedures.
Radiation Control	R, D, P	Evaluate Conditions for Restart of Refueling Pre-shuffle in the Spent Fuel Pit 2.3.12 (3.2): Knowledge of radiological safety principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.
Emergency Procedures/Plan		NOT SELECTED FOR RO EXAM

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

* Type Codes & Criteria:

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

JPM SUMMARY STATEMENTS

- A.1.a Calculate a Manual Makeup to the VCT – Unit is at 100% power, with a VCT level of 20%. Examinee is given a desired VCT level and boric acid flow rate and is directed to calculate the primary water flow rate, boric acid and primary water volumes, and controller potentiometer settings for the manual makeup. This is a modified bank JPM.
- A.1.b Determine Heatup of the RCS – Unit has undergone a heatup to 380°F and relevant data is provided on Attachment 2, Heatup Data Sheet, of 3-OSP-041.7, Reactor Coolant System Heatup and Cooldown Temperature Verification. Examinee must complete the procedure and record any discrepancies and subsequent procedural actions that apply. This is a bank JPM.
- A.2 Review an ECO for the 3A Heater Drain Pump – Power is reduced to 35%, to support the replacement of a damaged mechanical seal package on the 3A HDP. Examinee is directed to review the prepared ECO for completeness and accuracy (with eSOMS NOT available) and identify any items that do not meet plant conditions or the requirements of OP-AA-101-1000, Clearance and Tagging. This is a new JPM.
- A.3 Evaluate Conditions for Restart of Refueling Pre-shuffle in the Spent Fuel Pit – Refueling pre-shuffle activities in the SFP were interrupted and management desires to resume the shuffle. Examinee is provided a list of plant conditions and inoperable equipment and must determine whether recommencement may occur in accordance with 3-NOP-040.03, Fuel Handling and Insert Shuffle in the Spent Fuel Pit. Examinee will use Attachment 2, Restart Minimum Equipment Checklist, and must identify four items that preclude recommencement. This is a bank JPM, previously used on the 2013 NRC exam.
- A.4 NOT SELECTED FOR RO EXAM

ES-301

Administrative Topics Outline

Form ES-301-1

Facility: **Turkey Point Units 3 & 4**Date of Examination: **08/22/2016**Examination Level: RO ☐ SRO ☒Operating Test Number: **2016-301**

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	R, M	Calculate a Manual Makeup to the VCT 2.1.25 (4.2): Ability to interpret reference materials, such as graphs, curves, tables, etc.
Conduct of Operations	R, D	Determine Heatup of the RCS 2.1.20 (4.6): Ability to interpret and execute procedure steps.
Equipment Control	R, D	Evaluate TS Conditions While Performing a Valve Operability Test 2.2.40 (4.7): Ability to apply Technical Specifications for a system.
Radiation Control	R, D	Authorize Emergency Exposure Limits 2.3.4 (3.7): Knowledge of radiation exposure limits under normal or emergency conditions.
Emergency Procedures/Plan	R, D	Classify Event and Complete SNF 2.4.41 (4.6): Knowledge of the emergency action level thresholds and classifications.

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

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

JPM SUMMARY STATEMENTS

- A.1.a Calculate a Manual Makeup to the VCT – Unit is at 100% power, with a VCT level of 20%. Examinee is given a desired VCT level and boric acid flow rate and is directed to calculate the primary water flow rate, boric acid and primary water volumes, and controller potentiometer settings for the manual makeup. This is a modified bank JPM.
- A.1.b Determine Heatup of the RCS – Unit has undergone a heatup to 380°F and relevant data is provided on Attachment 2, Heatup Data Sheet, of 3-OSP-041.7, Reactor Coolant System Heatup and Cooldown Temperature Verification. Examinee must complete the procedure and record any discrepancies, subsequent procedural actions, and/or Technical Specification actions that apply. This is a bank JPM.
- A.2 Evaluate TS Conditions While Performing a Valve Operability Test – Unit is in Mode 3 and 4-OSP-047.1E, Letdown Line Isolation Valve Test, is in progress. Given Control Room indications, examinee must determine if any actions are required with regard to ESFAS instrumentation, accident monitoring instrumentation, or containment isolation valves. This is a bank JPM.
- A.3 Authorize Emergency Exposure Limits – A General Emergency has been declared and an Owner Controlled Area evacuation is in progress. A rescue of an unconscious person in a high-dose area is to be performed. Examinee must select two individuals from a list of available rescuers and determine whether they should be issued potassium iodide. This is a bank JPM.
- A.4 Classify Event and Complete SNF – Unit is in Mode 5, when it experiences a loss of all AC power. Plant and meteorological conditions are provided and examinee must classify the event using 0-EPIP-20101, Duties of Emergency Coordinator, and issue protective action recommendations using 0-EPIP-20134, Offsite Notifications and Protective Action Recommendations. This is a bank JPM.

ES-301

Control Room/In-Plant Systems Outline

Form ES-301-2

Facility: **Turkey Point Units 3 & 4**Date of Examination: **08/22/2016**Exam Level: **RO** ☒ **SRO-I** ☐ **SRO-U** ☐Operating Test Number: **2016-301**

Control Room Systems: * 8 for RO; 7 for SRO-I; 2 or 3 for SRO-U

System / JPM Title	Type Code*	Safety Function
a. 001 Control Rod Drive System (A4.14, 3.0) / Respond to Control Bank D Demanded Past 230 Steps	A, D, P, S	1
b. 004 Chemical and Volume Control System (A4.06, 3.6) / Place Excess Letdown In Service	A, D, S	2
c. EPE 038 Steam Generator Tube Rupture (EA1.04, 4.3) / Establish Auxiliary Pressurizer Spray per 3-EOP-E-3	A, N, S	3
d. APE 025 Residual Heat Removal System (AA1.03, 3.4) / Respond to a Loss of RHR	L, D, P, S	4P
e. 026 Containment Spray System (A3.01, 4.3) / Manually Initiate Containment Spray	D, EN, S	5
f. EPE 055 Station Blackout (EA1.07, 4.3) / Restore Power to the 3A 4kV Bus	A, N, S	6
g. 015 Nuclear Instrumentation System (A4.02, 3.9) / Place N-3-42 Power Range Drawer in Service	D, S	7
h. APE 068 Control Room Evacuation (AA1.23, 4.3) / Respond to Control Room Evacuation Condition – Unit 3 RO	D, S	8

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

i. EPE 029 Anticipated Transient Without Scram (EA1.12, 4.1) / Locally Trip the Reactor and Turbine	D, E	1
j. APE 054 Loss of Main Feedwater (AA1.01, 4.5) / Control Steam Generator Level Locally with Auxiliary Feedwater Control Valve	D, E	4S
k. APE 026 Loss of Component Cooling Water (AA1.03, 3.6) / Align Emergency Service Water to the Charging Pumps	D, E, R	8

* All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all five 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	$\leq 9 / \leq 8 / \leq 4$
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$
(EN)gineered safety feature	$\geq 1 / \geq 1 / \geq 1$ (control room system)
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)
(R)CA	$\geq 1 / \geq 1 / \geq 1$
(S)imulator	

JPM SUMMARY STATEMENTS

- a. Respond to Control Bank D Demanded Past 230 Steps – Examinee enters 3-ONOP-028, Reactor Control System Malfunction, to restore the Rod Control System to normal configuration with Bank D at 229 steps withdrawn. When examinee places the Rod Control Selector Switch in automatic, rods begin inserting at fast speed, and examinee must respond by placing the Rod Control Selector Switch in manual. This is a bank alternate-path JPM, previously used on the 2013 NRC exam.
- b. Place Excess Letdown In Service – Examinee uses 3-OP-047, CVCS Charging and Letdown, to place excess letdown in service. When CV-3-387 (Excess Letdown Isolation Valve) is opened, examinee must recognize that RV-3-304 has failed open and provides a direct path to the containment sump. Examinee must either close CV-3-387 or transition to 3-ONOP-041.3, Excessive Reactor Coolant System Leakage, to start a charging pump and maintain pressurizer level. This is a bank alternate-path JPM.
- c. Establish Auxiliary Pressurizer Spray per 3-EOP-E-3 – The unit has experienced a SGTR. The ruptured SG has been isolated, the RCS has been cooled down, and the examinee is directed to depressurize the RCS to minimize break flow and refill the pressurizer. Examinee must recognize that the PORVs can NOT be opened and, alternatively, will establish auxiliary pressurizer spray using Attachment 4 of 3-EOP-E-3, Steam Generator Tube Rupture. This is a new alternate-path JPM.
- d. Respond to a Loss of RHR – The unit is on RHR cooling, when MOV-3-750 (RHR Pump Suction from RCS) inadvertently closes and the running RHR pump's shaft shears. To mitigate, examinee enters 3-ONOP-050 (Loss of RHR) and re-opens the suction valve, secures the damaged pump, realigns RHR, starts the standby pump, and reinitiates cooling flow. This is a bank shutdown JPM, previously used on the 2015 NRC exam.
- e. Manually Initiate Containment Spray – The unit has tripped and safety injection/phase-A containment isolation have actuated. Examinee is performing prompt action verifications in Attachment 3 of 3-EOP-E-0 (Reactor Trip or Safety Injection) and must recognize that containment spray/phase-B containment isolation have NOT actuated; examinee will manually initiate at least one train of containment spray, actuate a phase-B containment isolation and manually close phase-B valves that fail to reposition, secure RCPs, and secure the Unit 4 HHSI pumps. This is a bank engineered-safeguards JPM.
- f. Restore Power to the 3A 4kV Bus – The unit has experienced a loss of all AC power. The 3A EDG did NOT start. The 3B EDG started but did not energize the 3B 4kV Bus. The Examinee is directed to restore power with a priority on the 3B EDG. The Examinee will discover the 3B 4KV Bus is locked out will restore power to the 3A 4kV Bus via the SBO tie line. This is a new alternate-path and time critical JPM.
- g. Place N-3-42 Power Range Drawer in Service – The unit is at 100% power and examinee is directed to place the N-3-42 power range drawer in service using 3-OSP-059.4, Power Range Nuclear Instrumentation Analog Channel Operational Test. This is a bank JPM.
- h. Respond to Control Room Evacuation Condition (Unit 3 RO) – Due to a fire, examinee responds as the unit RO per Attachment 14 of 0-ONOP-105, Control Room Evacuation, and trips the reactor/ turbine, closes the MSIVs, trips the main feedwater pumps, closes the atmospheric steam/dumps, closes the PORVs/block valves, and trips the RCPs. This is a time-critical bank JPM.
- i. Locally Trip the Reactor and Turbine – The unit has experienced an ATWS and the examinee is directed to trip the reactor and turbine locally. Examinee will proceed to the 3B MCC Room, open all reactor trip, bypass, and MG set breakers, and then trip the turbine at the turbine's front standard. This is a bank JPM.
- j. Control Steam Generator Level Locally with Auxiliary Feedwater Control Valve – The unit has tripped. AFW flow is required to the 3C SG. Examinee is directed to investigate and locally restore AFW flow to the 3C SG per 3-ONOP-075, Auxiliary Feedwater System Malfunction. Examinee will discover that train-2 flow to the 3C SG is NOT available and train-1 flow control valve will NOT open manually. Examinee will transition to Attachment 3 of the ONOP to locally manipulate valves and restore feedwater flow to the 3C SG. This is a bank emergency JPM.
- k. Align Emergency Service Water to the Charging Pumps – Level can NOT be maintained in the CCW Surge Tank and a loss of cooling to the charging pumps is imminent. Examinee will use Attachment 1 of 3-ONOP-030, Component Cooling Water Malfunction, to locally establish emergency cooling water to these pumps. This is a bank RCA/emergency JPM.

ES-301

Control Room/In-Plant Systems Outline

Form ES-301-2

Facility: **Turkey Point Units 3 & 4**Date of Examination: **08/22/2016**Exam Level: RO ☐ SRO-I ☒ SRO-U ☐Operating Test Number: **2016-301**

Control Room Systems: * 8 for RO; 7 for SRO-I; 2 or 3 for SRO-U

System / JPM Title	Type Code*	Safety Function
a. 001 Control Rod Drive System (A4.14, 3.4) / Respond to Control Bank D Demanded Past 230 Steps	A, D, P, S	1
b. 004 Chemical and Volume Control System (A4.06, 3.1) / Place Excess Letdown In Service	A, D, S	2
c. EPE 038 Steam Generator Tube Rupture (EA1.04, 4.1) / Establish Auxiliary Pressurizer Spray per 3-EOP-E-3	A, N, S	3
d. APE 025 Residual Heat Removal System (AA1.03, 3.3) / Respond to a Loss of RHR	L, D, P, S	4P
e. 026 Containment Spray System (A3.01, 4.5) / Manually Initiate Containment Spray	D, EN, S	5
f. EPE 055 Station Blackout (EA1.07, 4.5) / Restore Power to the 3A 4kV Bus	A, N, S	6
g. 015 Nuclear Instrumentation System (A4.02, 3.9) / Place N-3-42 Power Range Drawer in Service	D, S	7
h. NOT SELECTED FOR SRO EXAM		

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

i. EPE 029 Anticipated Transient Without Scram (EA1.12, 4.0) / Locally Trip the Reactor and Turbine	D, E	1
j. APE 054 Loss of Main Feedwater (AA1.01, 4.4) / Control Steam Generator Level Locally with Auxiliary Feedwater Control Valve	D, E	4S
k. APE 026 Loss of Component Cooling Water (AA1.03, 3.6) / Align Emergency Service Water to the Charging Pumps	D, E, R	8

* All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all five 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 (C)ontrol room (D)irect from bank (E)mergency or abnormal in-plant (EN)gineered safety feature (L)ow-Power / Shutdown (N)ew or (M)odified from bank including 1(A) (P)revious 2 exams (R)CA (S)imulator	4-6 / 4-6 / 2-3 $\leq 9 / \leq 8 / \leq 4$ $\geq 1 / \geq 1 / \geq 1$ $\geq 1 / \geq 1 / \geq 1$ (control room system) $\geq 1 / \geq 1 / \geq 1$ $\geq 2 / \geq 2 / \geq 1$ $\leq 3 / \leq 3 / \leq 2$ (randomly selected) $\geq 1 / \geq 1 / \geq 1$

JPM SUMMARY STATEMENTS

- a. Respond to Control Bank D Demanded Past 230 Steps – Examinee enters 3-ONOP-028, Reactor Control System Malfunction, to restore the Rod Control System to normal configuration with Bank D at 229 steps withdrawn. When examinee places the Rod Control Selector Switch in automatic, rods begin inserting at fast speed, and examinee must respond by placing the Rod Control Selector Switch in manual. This is a bank alternate-path JPM, previously used on the 2013 NRC exam.
- b. Place Excess Letdown In Service – Examinee uses 3-OP-047, CVCS Charging and Letdown, to place excess letdown in service. When CV-3-387 (Excess Letdown Isolation Valve) is opened, examinee must recognize that RV-3-304 has failed open and provides a direct path to the containment sump. Examinee must either close CV-3-387 or transition to 3-ONOP-041.3, Excessive Reactor Coolant System Leakage, to start a charging pump and maintain pressurizer level. This is a bank alternate-path JPM.
- c. Establish Auxiliary Pressurizer Spray per 3-EOP-E-3 – The unit has experienced a SGTR. The ruptured SG has been isolated, the RCS has been cooled down, and the examinee is directed to depressurize the RCS to minimize break flow and refill the pressurizer. Examinee must recognize that the PORVs can NOT be opened and, alternatively, will establish auxiliary pressurizer spray using Attachment 4 of 3-EOP-E-3, Steam Generator Tube Rupture. This is a new alternate-path JPM.
- d. Respond to a Loss of RHR – The unit is on RHR cooling, when MOV-3-750 (RHR Pump Suction from RCS) inadvertently closes and the running RHR pump's shaft shears. To mitigate, examinee enters 3-ONOP-050 (Loss of RHR) and re-opens the suction valve, secures the damaged pump, realigns RHR, starts the standby pump, and reinitiates cooling flow. This is a bank shutdown JPM, previously used on the 2015 NRC exam.
- e. Manually Initiate Containment Spray – The unit has tripped and safety injection/phase-A containment isolation have actuated. Examinee is performing prompt action verifications in Attachment 3 of 3-EOP-E-0 (Reactor Trip or Safety Injection) and must recognize that containment spray/phase-B containment isolation have NOT actuated; examinee will manually initiate at least one train of containment spray, actuate a phase-B containment isolation and manually close phase-B valves that fail to reposition, secure RCPs, and secure the Unit 4 HHSI pumps. This is a bank engineered-safeguards JPM.
- f. Restore Power to the 3A 4kV Bus – The unit has experienced a loss of all AC power. The 3A EDG did NOT start. The 3B EDG started but did not energize the 3B 4kv Bus. The Examinee is directed to restore power with a priority on the 3B EDG. The Examinee will discover the 3B 4KV Bus is locked out will restore power to the 3A 4kV Bus via the SBO tie line. This is a new alternate-path and time critical JPM.
- g. Place N-3-42 Power Range Drawer in Service – The unit is at 100% power and examinee is directed to place the N-3-42 power range drawer in service using 3-OSP-059.4, Power Range Nuclear Instrumentation Analog Channel Operational Test. This is a bank JPM.
- h. NOT SELECTED FOR SRO EXAM
- i. Locally Trip the Reactor and Turbine – The unit has experienced an ATWS and the examinee is directed to trip the reactor and turbine locally. Examinee will proceed to the 3B MCC Room, open all reactor trip, bypass, and MG set breakers, and then trip the turbine at the turbine's front standard. This is a bank JPM.
- j. Control Steam Generator Level Locally with Auxiliary Feedwater Control Valve – The unit has tripped. AFW flow is required to the 3C SG. Examinee is directed to investigate and locally restore AFW flow to the 3C SG per 3-ONOP-075, Auxiliary Feedwater System Malfunction. Examinee will discover that train-2 flow to the 3C SG is NOT available and train-1 flow control valve will NOT open manually. Examinee will transition to Attachment 3 of the ONOP to locally manipulate valves and restore feedwater flow to the 3C SG. This is a bank emergency JPM.
- k. Align Emergency Service Water to the Charging Pumps – Level can NOT be maintained in the CCW Surge Tank and a loss of cooling to the charging pumps is imminent. Examinee will use Attachment 1 of 3-ONOP-030, Component Cooling Water Malfunction, to locally establish emergency cooling water to these pumps. This is a bank RCA/emergency JPM.

ES-301

Operating Test Quality Checklist

Form ES-301-3

Facility: <u>Turkey Point Units 3+4</u>		Date of Examination: <u>8/22/16</u>		Operating Test Number: <u>2016-301</u>	
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).	<u>N</u>	<u>CB</u>	<u>AK</u>	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	<u>N</u>	<u>CB</u>	<u>AK</u>	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	<u>N</u>	<u>CB</u>	<u>AK</u>	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	<u>N</u>	<u>CB</u>	<u>AK</u>	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	<u>N</u>	<u>CB</u>	<u>AK</u>	
2. Walk-Through Criteria		--	--	--	
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> initial conditions initiating cues references and tools, including associated procedures reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee operationally important specific performance criteria that include: <ul style="list-style-type: none"> detailed expected actions with exact criteria and nomenclature system response and other examiner cues statements describing important observations to be made by the applicant criteria for successful completion of the task identification of critical steps and their associated performance standards restrictions on the sequence of steps, if applicable 	<u>N</u>	<u>CB</u>	<u>AK</u>	
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.	<u>N</u>	<u>CB</u>	<u>AK</u>	
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.		<u>N</u>	<u>CB</u>	<u>AK</u>	
Printed Name / Signature		Date			
a.	Author <u>Mark Wilson / [Signature]</u>	<u>8/5/16</u>			
b.	Facility Reviewer(*) <u>SEAN BLOOM / [Signature]</u>	<u>8/16/16</u>			
c.	NRC Chief Examiner (#) <u>Philip G. Capenat / [Signature]</u>	<u>8/17/16</u>			
d.	NRC Supervisor <u>Geoff J. McCaig / [Signature]</u>	<u>8/17/2016</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

L-16-1 NRC EXAM SECURE INFORMATION
Simulator Scenario Quality Checklist

ES-301

Form ES-301-4

Facility: **Turkey Point Units 3 & 4**

Date of Exam: **08/22/2016**

Scenario Numbers: **1 / 2 / 3 / 4 / 5**

Operating Test No.: **2016-301**

QUALITATIVE ATTRIBUTES		Initials		
		a	b*	c#
1. The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.		<i>M</i>	<i>CB</i>	<i>AK</i>
2. The scenarios consist mostly of related events.		<i>M</i>	<i>CB</i>	<i>AK</i>
3. Each event description consists of <ul style="list-style-type: none"> the point in the scenario when it is to be initiated the malfunction(s) or conditions that are entered to initiate the event the symptoms/cues that will be visible to the crew the expected operator actions (by shift position) the event termination point (if applicable) 		<i>M</i>	<i>CB</i>	<i>AK</i>
4. The events are valid with regard to physics and thermodynamics.		<i>M</i>	<i>CB</i>	<i>AK</i>
5. Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.		<i>M</i>	<i>CB</i>	<i>AK</i>
6. If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.		<i>M</i>	<i>CB</i>	<i>AK</i>
7. The simulator modeling is not altered.		<i>M</i>	<i>CB</i>	<i>AK</i>
8. The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.		<i>M</i>	<i>CB</i>	<i>AK</i>
9. Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.		<i>M</i>	<i>CB</i>	<i>AK</i>
10. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).		<i>M</i>	<i>CB</i>	<i>AK</i>
11. The scenario set provides the opportunity for each applicant to be evaluated in each of the applicable rating factors. (Competency Rating factors as described on forms ES-303-1 and ES-303-3.)		<i>M</i>	<i>CB</i>	<i>AK</i>
12. Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).		<i>M</i>	<i>CB</i>	<i>AK</i>
13. The level of difficulty is appropriate to support licensing decisions for each crew position.		<i>M</i>	<i>CB</i>	<i>AK</i>
Target Quantitative Attributes (Per Scenario; See Section D.5.d)	Actual Attributes	--	--	--
1. Malfunctions after EOP entry (1-2)	2 / 2 / 2 / 2 / 2	<i>M</i>	<i>CB</i>	
2. Abnormal events (2-4)	4 / 5 / 3 / 3 / 5	<i>M</i>	<i>CB</i>	
3. Major transients (1-2)	1 / 1 / 1 / 2 / 1	<i>M</i>	<i>CB</i>	
4. EOPs entered/requiring substantive actions (1-2)	1 / 1 / 1 / 2 / 1	<i>M</i>	<i>CB</i>	
5. EOP contingencies requiring substantive actions (0-2)	0 / 1 / 0 / 0 / 0	<i>M</i>	<i>CB</i>	
6. EOP based Critical tasks (2-3)	2 / 2 / 2 / 2 / 4	<i>M</i>	<i>CB</i>	
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.		<i>Scenario AS NT required AK</i>		

Facility: Turkey Point Units 3 & 4

Date of Exam: 8/22/16

Operating Test No.: 2016-301

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(*)	
		L-16-1 N1 (Spare)			L-16-1 N2			L-16-1 N3			L-16-1 N4			L-16-1 N5					
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION					
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P		R	I
SROI-1	RX				4							2		5			3		1
	NOR				1*												1		1
	I/C				2,3,5							3, 4		1,2 3,4			9		4
	MAJ				6							5,7		6			4		2
	TS				3,5									1,4			4		2
SROI-2	RX					4					2			5			3		1
	NOR										1*						1		1
	I/C					1,2					3,4			1,2 3,4			8		4
	MAJ					6					5,7			6			4		2
	TS										1,3			1,4			4		2
SROI-3	RX				4						2				5		3		1
	NOR				1*												1		1
	I/C				2,3,5						1,3,4				2,4		8		4
	MAJ				6						5,7				6		4		2
	TS				3,5						1,3						4		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 (SRO-I) must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an SRO-I *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.
2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a one-for-one 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.
4. For licensees that use the ATC operator primarily for monitoring plant parameters, the chief examiner may place SRO-I applicants in either the ATC or BOP position to best evaluate the SRO-I in manipulating plant controls.

L-16-1 NRC EXAM SECURE INFORMATION

ES-301

Transient and Event Checklist

Form ES-301-5

Facility: **Turkey Point Units 3 & 4**

Date of Exam: **8/22/16**

Operating Test No.: **2016-301**

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(*)	
		L-16-1 N1 (Spare)			L-16-1 N2			L-16-1 N3			L-16-1 N4			L-16-1 N5					
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION					
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P			R
RO-6	RX											2					1	1	
	NOR						4										1	1	
	I/C						3,5					3, 4					4	4	
	MAJ						6					5,7					3	2	
	TS																0	0	
RO-7	RX								1								1	1	
	NOR															5	1	1	
	I/C								3,6							1,3	4	4	
	MAJ								8							6	2	2	
	TS																0	0	

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 (SRO-I) must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an SRO-I *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.
2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a one-for-one 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.
4. For licensees that use the ATC operator primarily for monitoring plant parameters, the chief examiner may place SRO-I applicants in either the ATC or BOP position to best evaluate the SRO-I in manipulating plant controls.

L-16-1 NRC EXAM SECURE INFORMATION

ES-301

Competencies Checklist

Form ES-301-6

Facility: Turkey Point Units 3&4		Date of Examination: 8/22/16					Operating Test No.: 2016-301								
Competencies	APPLICANTS														
	SRO					RO					BOP				
	SCENARIO					SCENARIO					SCENARIO				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Interpret/Diagnose Events and Conditions	1-6	1-6	1-6 8	1-5 7	1-6	1-6	1-6	1-6 8	1-5 7	1-6	1-6	1-6	1-6 8	1-5 7	1-6
Comply With and Use Procedures (1)	1-6	1-6	1-6 8	1-5 7	1-6	1-6	1-6	1-6 8	1-5 7	1-6	1-6	1-6	1-6 8	1-5 7	1-6
Operate Control Boards (2)	N/A	N/A	N/A	N/A	N/A	1,2 4,6	1,2 4,6	1,3 6,8	2,3,4 5,7	2,4 5,6	2,3 5,6	3,4 5,6	1,2 4,8	1,2,3 5,7	1,3 5,6
Communicate and Interact	1-6	1-6	1-6 8	1-5 7	1-6	1-6	1-6	1-6 8	1-5 7	1-6	1-6	1-6	1-6 8	1-5 7	1-6
Demonstrate Supervisory Ability (3)	1-6	1-6	1-6 8	1-5 7	1-6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Comply With and Use Tech. Specs. (3)	1,3	3,5	2,5	1,3	1,4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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. (This includes all rating factors for each competency.) (Competency Rating factors as described on forms ES-303-1 and ES-303-3.)

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, Rev. 10

PWR Examination Outline

Form ES-401-2

Facility: Turkey Point		Date of Exam: 2016															
Tier	Group	RO K/A Category Points												SRO-Only Points			
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total	
1. Emergency & Abnormal Plant Evolutions	1	3	3	3	N/A			3	3	N/A			3	18	3	3	6
	2	2	1	2				1	2				1	9	2	2	4
	Tier Totals	5	4	5				4	5				4	27	5	5	10
2. Plant Systems	1	3	2	2	2	3	3	3	3	1	3	3	28	3	2	5	
	2	1	0	1	1	1	1	1	1	1	1	1	10	2	1	3	
	Tier Totals	4	2	3	3	4	4	4	4	2	4	4	38		3	8	
3. Generic Knowledge and Abilities Categories					1	2	3	4	10				1	2	3	4	7
					3	2	2	3					1	2	2	2	

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

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

T1G1 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
1.	007EG2.4.34 Reactor Trip - Stabilization - Recovery / 1	4.2	4.1	<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 checked="" type="checkbox"/>	Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects
2.	008AA1.05 Pressurizer Vapor Space Accident / 3	3.4	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LPI System
3.	009EK1.02 Small Break LOCA / 3	3.5	4.2	<input checked="" 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"/>	Use of steam tables
4.	011EK3.03 Large Break LOCA / 3	4.1	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Starting auxiliary feed pumps and flow, ED/G, and service water pumps
5.	015AK2.08 RCP Malfunctions / 4	2.6	2.6	<input type="checkbox"/>	<input checked="" 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"/>	CCWS
6.	022AK1.04 Loss of Rx Coolant Makeup / 2	2.9	3	<input checked="" 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"/>	Reason for changing from manual to automatic control of charging flow valve controller
<p><i>**No Charging flow valve controller on our plant. Suggest expand scope to charging pump speed controller. Changed to AK1.03</i></p>														
7.	025AA1.09 Loss of RHR System / 4	3.2	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LPI pump switches, ammeter, discharge pressure gauge, flow meter, and indicators
8.	027AA1.05 Pressurizer Pressure Control System Malfunction / 3	3.3	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Transfer of heaters to backup power supply
<p><i>**No Backup power supply at our plant. Suggest expand scope. Could hit K/A on EDG max loading? Changed to AA1.03</i></p>														
9.	029EK2.06 ATWS / 1	2.9	3.1	<input type="checkbox"/>	<input checked="" 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"/>	Breakers, relays, and disconnects.
10.	038EA2.13 Steam Gen. Tube Rupture / 3	3.1	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Magnitude of rupture
11.	054AA2.08 Loss of Main Feedwater / 4	2.9	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Steam flow-feed trend recorder

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

T1G1 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
12.	055EG2.1.19 Station Blackout / 6	3.9	3.8	<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 checked="" type="checkbox"/>	Ability to use plant computer to evaluate system or component status.
13.	056AK1.03 Loss of Off-site Power / 6	3.1	3.4	<input checked="" 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"/>	Definition of subcooling: use of steam tables to determine it
<i>**Double Jeopardy w/ Q. 13. Suggest keep 3 and change 13. Changed to AK1.04</i>														
14.	057AK3.01 Loss of Vital AC Inst. Bus / 6	4.1	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions contained in EOP for loss of vital ac electrical instrument bus
15.	062AK3.02 Loss of Nuclear Svc Water / 4	3.6	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The automatic actions (alignments) within the nuclear service water resulting from the actuation of the ESFAS
16.	065AA2.05 Loss of Instrument Air / 8	3.4	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When to commence plant shutdown if instrument air pressure is decreasing
17.	WE05EK2.2 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	3.9	4.2	<input type="checkbox"/>	<input checked="" 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"/>	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.
18.	we12EG2.2.44 Steam Line Rupture - Excessive Heat Transfer / 4	4.2	4.4	<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 checked="" type="checkbox"/>	Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

T1G2 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
19.	003AK1.13 Dropped Control Rod / 1	3.2	3.6	<input checked="" 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"/>	Interaction of ICS control stations as well as purpose, function and modes of operation of ICS
	**No ICS. Suggest New K/A. Changed to AK1.02													
20.	005AA2.01 Inoperable/Stuck Control Rod / 1	3.3	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stuck or inoperable rod from in-core and ex-core NIS, in-core or loop temperature measurements
21.	024AA2.06 Emergency Boration / 1	3.6	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When boron dilution is taking place
22.	036AK3.01 Fuel Handling Accident / 8	3.1	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Different inputs that will cause a reactor building evacuation
23.	037AG2.4.41 Steam Generator Tube Leak / 3	2.9	4.6	<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 checked="" type="checkbox"/>	Knowledge of the emergency action level thresholds and classifications.
	**SRO level. Suggest New K/A. Changed to G2.4.20													
24.	051AA1.04 Loss of Condenser Vacuum / 4	2.5 3.5	2.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Rod position
	**Relationship issue. Suggest how to write this question? Changed to 0067 Plant fire on-site AA1.06 Fire Alarm													
25.	WE03EK2.2 LOCA Cooledown - Depress. / 4	3.7	4.0	<input type="checkbox"/>	<input checked="" 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"/>	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.
26.	WE06EK1.3 Degraded Core Cooling / 4	3.7	3.9	<input checked="" 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"/>	Annunciators and conditions indicating signals, and remedial actions associated with the (Degraded Core Cooling).
27.	WE15EK3.3 Containment Flooding / 5	2.9	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Manipulation of controls required to obtain desired operating results during abnormal and emergency situations.
	**No actions or controls manipulated. Suggest New K/A. Changed to EK3.2													

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

T2G1 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
28.	003K3.04 Reactor Coolant Pump	3.9	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RPS
29.	004K6.09 Chemical and Volume Control	2.8	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Purpose of VCT divert valve
30.	004K6.22 Chemical and Volume Control	2.6	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design minimum and maximum flow rates for letdown system.
31.	005K2.03 Residual Heat Removal	2.7	2.8	<input type="checkbox"/>	<input checked="" 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"/>	RCS pressure boundary motor-operated valves
32.	006A4.03 Emergency Core Cooling	3.5	3.5	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	Transfer from boron storage tank to boron injection tank
														Changed to A4.08
33.	007A4.04 Pressurizer Relief/Quench Tank	2.6	2.6	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	PZR vent valve
														Changed to A4.10
34.	008K4.01 Component Cooling Water	3.1	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automatic start of standby pump
35.	010K2.02 Pressurizer Pressure Control	2.5	2.7	<input type="checkbox"/>	<input checked="" 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"/>	Controller for PZR spray valve
36.	012K1.04 Reactor Protection	3.2	3.3	<input checked="" 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"/>	RPIS
37.	013K5.01 Engineered Safety Features Actuation	2.8	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Definitions of safety train and ESF channel
38.	022G2.2.12 Containment Cooling	3.7	4.1	<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 checked="" type="checkbox"/>	Knowledge of surveillance procedures.

**No BIT. Suggest New K/A.

**Clarify "vent valve". Does PORV, safety apply?

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

T2G1 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
39.	022K1.01	Containment Cooling	3.5	3.7	<input checked="" 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"/>	SWS/cooling system
40.	026G2.4.4	Containment Spray	4.5	4.7	<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 checked="" type="checkbox"/>	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.
41.	039A3.02	Main and Reheat Steam	3.1	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Isolation of the MRSS
42.	059A1.07	Main Feedwater	2.5	2.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Feed Pump speed, including normal control speed for ICS
**No ICS. Suggest New K/A.														No FWP Speed control. Changed to A1.03
43.	059K4.19	Main Feedwater	3.2	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automatic feedwater isolation of MFW
44.	061K1.10	Auxiliary/Emergency Feedwater	2.6	2.7	<input checked="" 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"/>	Diesel fuel oil
**Expand scope? DDSSFP fits. Yes, S/U FW pumps will work.														
45.	061K5.01	Auxiliary/Emergency Feedwater	3.6	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relationship between AFW flow and RCS heat transfer
46.	062A1.01	AC Electrical Distribution	3.4	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Significance of D/G load limits
47.	063A1.01	DC Electrical Distribution	2.5	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Battery capacity as it is affected by discharge rate
48.	063A4.01	DC Electrical Distribution	2.8	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Major breakers and control power fuses
49.	064K6.07	Emergency Diesel Generator	2.7	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Air receivers

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

T2G1 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
50.	073K3.01 Process Radiation Monitoring	3.6	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive effluent releases
51.	073K5.02 Process Radiation Monitoring	2.5	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation intensity changes with source distance
**RCAT question. Hard to write to LOD. Request ideas or New K/A. <i>Changed to 039 MRSS K5.08</i>														
52.	076A2.01 Service Water	3.5	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of SWS
**Same topic area with #54. <i>Changed to 003A2.02</i>														
53.	076A2.02 Service Water	2.7	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Service water header pressure
54.	078G2.2.25 Instrument Air	3.2	4.2	<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 checked="" type="checkbox"/>	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.
**Relationship issue. Request New K/A.														
55.	103A2.04 Containment	3.5	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment evacuation (including recognition of the alarm)

Changed to G2.2.44

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 9

T2G2 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
56.	002K5.14 Reactor Coolant	3.8	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Consequences of forced circulation loss
57.	011K4.05 Pressurizer Level Control	3.7	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PZR level inputs to RPS
58.	014A1.02 Rod Position Indication	3.2	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Control rod position indication on control room panels
59.	017K6.01 In-core Temperature Monitor	2.7	3.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sensors and detectors
60.	029A4.01 Containment Purge	2.5	2.5	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	Containment purge flow rate
61.	033A2.01 Spent Fuel Pool Cooling	3.0	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inadequate SDM
62.	035G2.4.6 Steam Generator	3.7	4.7	<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 checked="" type="checkbox"/>	Knowledge symptom based EOP mitigation strategies.
63.	055K3.01 Condenser Air Removal	2.5	2.7	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Main condenser
64.	068A3.02 Liquid Radwaste	3.6	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automatic isolation
65.	079K1.01 Station Air	3.0	3.1	<input checked="" 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"/>	IAS

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

T3 PWR EXAMINATION OUTLINE

FORM ES-401-2

	KA	NAME / SAFETY FUNCTION:	IR		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
			RO	SRO												
66.	G2.1.36	Conduct of operations	3.0	4.1	<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 checked="" type="checkbox"/>	Knowledge of procedures and limitations involved in core alterations
67.	G2.1.45	Conduct of operations	4.3	4.3	<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 checked="" type="checkbox"/>	Ability to identify and interpret diverse indications to validate the response of another indication
68.	G2.1.8	Conduct of operations	3.4	4.1	<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 checked="" type="checkbox"/>	Ability to coordinate personnel activities outside the control room.
69.	G2.2.12	Equipment Control	3.7	4.1	<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 checked="" type="checkbox"/>	Knowledge of surveillance procedures.
70.	G2.2.41	Equipment Control	3.5	3.9	<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 checked="" type="checkbox"/>	Ability to obtain and interpret station electrical and mechanical drawings
71.	G2.3.15	Radiation Control	2.9	3.1	<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 checked="" type="checkbox"/>	Knowledge of radiation monitoring systems
72.	G2.3.7 Changed to G2.2.2	Radiation Control	3.5	3.6	<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 checked="" type="checkbox"/>	Ability to comply with radiation work permit requirements during normal or abnormal conditions
73.	G2.4.37	Emergency Procedures/Plans	3.0	4.1	<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 checked="" type="checkbox"/>	Knowledge of the lines of authority during implementation of an emergency plan.
74.	G2.4.5	Emergency Procedures/Plans	3.7	4.3	<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 checked="" type="checkbox"/>	Knowledge of the organization of the operating procedures network for normal, abnormal and emergency evolutions.
75.	G2.4.8 G2.4.3	Emergency Procedures/Plans	3.8	4.5	<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 checked="" type="checkbox"/>	Knowledge of how abnormal operating procedures are used in conjunction with EOPs.

***Doesn't match for RCO. Double Jeopardy with SRO #100. Request New K/A. Change to G2.4.3*

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

SRO T1G1 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
76.	007EA2.04 Reactor Trip - Stabilization - Recovery / 1	4.6	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If reactor should have tripped but has not done so, manually trip the reactor and carry out actions in ATWS EOP
<i>**RO only. Any ideas? Changed to EA2.02</i>														
77.	015AG2.4.21 RCP Malfunctions / 4	4.0	4.6	<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 checked="" type="checkbox"/>	Knowledge of the parameters and logic used to assess the status of safety functions
<i>**Any ideas on how to write to this relationship? New concept CSF INVENTORY. Changed to 2.4.31 Knowledge of ARPs, indic, or response procedures.</i>														
78.	026AA2.03 Loss of Component Cooling Water / 8	2.6	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The valve lineups necessary to restart the CCWS while bypassing the portion of the system causing the abnormal condition
<i>**RO only. Any ideas? Give example question</i>														
79.	062AG2.4.2 Loss of Nuclear Svc Water / 4	4.5	4.6	<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 checked="" type="checkbox"/>	Knowledge of system set points, interlocks and automatic actions associated with EOP entry conditions.
<i>**RO only. Any ideas? Give example question</i>														
80.	065AG2.4.30 Loss of Instrument Air / 8	2.7	4.1	<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 checked="" type="checkbox"/>	Knowledge of events related to system operations/status that must be reported to internal organizations or outside agencies.
81.	WE04EA2.1 LOCA Outside Containment / 3	3.4	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

SRO T1G2 PWR EXAMINATION OUTLINE

FORM ES-401-2

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

- | | | | | | | | | | | | | | | | |
|--|--------------|--------------------------------------|-----|-----|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|-------------------------------------|---|
| 82. | 060AG2.2.39 | Accidental Gaseous Radwaste Rel. / 9 | 3.9 | 4.5 | <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 checked="" type="checkbox"/> | Knowledge of less than one hour technical specification action statements for systems.
Changed to 2.2.40 Apply TS |
| <i>**RO only. Suggest different topic and system. New K/A.</i> | | | | | | | | | | | | | | | |
| 83. | 061AA2.06 | ARM System Alarms / 7 | 3.2 | 4.1 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Required actions if alarm channel is out of service |
| 84. | 069AA2.01 | Loss of CTMT Integrity / 5 | 3.7 | 4.3 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Loss of containment integrity |
| 85. | we03EG2.4.20 | LOCA Cooldown - Depress. / 4 | 3.8 | 4.3 | <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 checked="" type="checkbox"/> | Knowledge of operational implications of EOP warnings, cautions and notes. |

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

SRO T2G1 PWR EXAMINATION OUTLINE

FORM ES-401-2

	KA	NAME / SAFETY FUNCTION:	IR		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
			RO	SRO												
86.	004G2.1.30	Chemical and Volume Control	4.4	4.0	<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 checked="" type="checkbox"/>	Ability to locate and operate components, including local controls.
87.	013A2.04	Engineered Safety Features Actuation	3.6	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of instrument bus
88.	061A2.04	Auxiliary/Emergency Feedwater	3.4	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pump failure or improper operation
89.	064G2.4.9	Emergency Diesel Generator	3.8	4.2	<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 checked="" type="checkbox"/>	Knowledge of low power / shutdown implications in accident (e.g. LOCA or loss of RHR) mitigation strategies.
90.	073A2.02	Process Radiation Monitoring	2.7	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Detector failure

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

SRO T2G2 PWR EXAMINATION OUTLINE

FORM ES-401-2

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

91.	001A2.09	Control Rod Drive	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Station blackout
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***Relationship issue. Ideas? Suggest expand topic. Changed to A2.17*

92.	028A2.03	Hydrogen Recombiner and Purge Control	3.4	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The H2 air concentration in excess of limit flame propagation or detonation with resulting equipment damage in containment
-----	---------------------	---------------------------------------	-----	-----	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	-------------------------------------	--------------------------	--------------------------	--------------------------	--

***Abandoned and taught with SACRGs after test is given. Expand to PAHMs time critical basis? Changed to 045A2.08*

93.	055G2.4.34	Condenser Air Removal	4.2	4.1	<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 checked="" type="checkbox"/>	Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects
-----	-----------------------	----------------------------------	-----	-----	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	--------------------------	-------------------------------------	---

***RO only. Any ideas? Changed to 017G2.4.30*

PTN L-16-1 NRC Exam Security Agreement In Effect

ES-401, REV 10

SRO T3 PWR EXAMINATION OUTLINE

FORM ES-401-2

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
94.	G2.1.4 Conduct of operations	3.3	3.8	<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 checked="" type="checkbox"/>	Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55 etc.
95.	G2.2.19 Equipment Control	2.3	3.4	<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 checked="" type="checkbox"/>	Knowledge of maintenance work order requirements.
96.	G2.2.43 Equipment Control	3.0	3.3	<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 checked="" type="checkbox"/>	Knowledge of the process used to track inoperable alarms
97.	G2.3.14 Radiation Control	3.4	3.8	<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 checked="" type="checkbox"/>	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities
**Same topic area with #98 These are two different topics.														
98.	G2.3.6 Radiation Control Changed to G2.1.36	2.0	3.8	<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 checked="" type="checkbox"/>	Ability to approve release permits
99.	G2.4.26 Emergency Procedures/Plans	3.1	3.6	<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 checked="" type="checkbox"/>	Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.
100.	G2.4.8 Emergency Procedures/Plans	3.8	4.5	<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 checked="" type="checkbox"/>	Knowledge of how abnormal operating procedures are used in conjunction with EOPs.

ES-401

Record of Rejected K/As

ES-401-4

Tier / Group	Randomly Selected K/A	Reason for Rejection
1 / 1	022 / AK1.04	No charging flow controller at PTN. Changed to AK1.03.
1 / 1	027 / AA1.05	No backup power supply at PTN. Changed to AA1.03.
1 / 1	056 / AK1.03	Double jeopardy with Q3. Changed to AK1.04.
1 / 2	003 / AK1.13	No ICS at PTN. Changed to AK1.02.
1 / 2	037 / AG2.4.41	SRO level. Changed to G2.4.20.
1 / 2	051 / AA1.04	No ICS at PTN. Changed to 067 AA1.06.
1 / 2	WE15 / EK3.3	No actions or controls manipulated at PTN. Changed to EK3.2.
2 / 1	006 / A4.03	No BIT at PTN. Changed to A4.08.
2 / 1	007 / A4.04	Limited test topic-minutia. Changed to A4.10.
2 / 1	059 / A1.07	No ICS at PTN. Changed to A1.03.
2 / 1	073 / K5.02	KA was not system friendly, was more of a GET/RWT question. Changed to 039 K5.08.
2 / 1	076 / A2.02	Double jeopardy with Q53. Changed to 003 A2.02.
2 / 1	078 / G2.2.25	SRO level. Changed to G2.2.44.
3	2.3.7	Rad worker practices at RCAT level. Changed to 2.2.2.
3	2.4.8	Double Jeopardy with Q100. Changed to 2.4.3.
1 / 1	007 / EA2.04	RO KA ONLY. Changed to EA2.02 to meet SRO criteria.
1 / 1	015 / AG2.4.21	SRO. No system to topic relationship for PTN. Changed to 2.4.31.
1 / 2	060 / AG2.2.39	RO only. Changed to 2.2.40.
2 / 2	001 / A2.09	No system to topic relationship for PTN. Changed to A2.17.
2 / 2	028 / A2.03	Post exam material (SACRGs). Changed to 045 A2.08.
2 / 2	055 / G2.4.34	RO only. Changed to 017G2.4.30.
3	2.3.6	Jeopardy with JPM. Changed to 2.1.36.

1/1 065 / AA2.05 Changed to AA2.06

L-16-1 NRC EXAM SECURE INFORMATION

ES-401

Written Examination Quality Checklist

Form ES-401-6

Facility: <u>Turkey Point Unit 3</u>		Date of Exam: <u>8/22/16</u>		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.				<u>ll</u>	<u>m</u>	<u>Alk</u>
2. a. NRC K/As are referenced for all questions.				<u>ll</u>	<u>m</u>	<u>Alk</u>
b. Facility learning objectives are referenced as available.				<u>ll</u>	<u>m</u>	<u>Alk</u>
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401				<u>m</u>	<u>m</u>	<u>Alk</u>
4. The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last two NRC licensing exams, consult the NRR/NRO OL program office).				<u>m</u>	<u>m</u>	<u>Alk</u>
5. Question duplication from the licensee screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate ___ The audit exam was systematically and randomly developed; or ___ the audit exam was completed before the license exam was started; or ___ the examinations were developed independently; or ___ the licensee certifies that there is no duplication; or ___ other (explain)				<u>m</u>	<u>m</u>	<u>Alk</u>
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 <u>12% 12% 24% 4% 64% 84%</u> <u>9/15 3/25 19/25 1/25 49/25 12/25</u>	Modified <u>24%</u>	New <u>4%</u>
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 <u>46.7% 40%</u> <u>35/25 10/25</u>	C/A <u>53.3% 60%</u> <u>40/25 15/25</u>	
8. References/handouts provided do not give away answers or aid in the elimination of distractors.				<u>m</u>	<u>m</u>	<u>Alk</u>
9. Question content conforms to specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.				<u>m</u>	<u>m</u>	<u>Alk</u>
10. Question psychometric quality and format meet the guidelines in ES Appendix B.				<u>m</u>	<u>m</u>	<u>Alk</u>
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.				<u>m</u>	<u>m</u>	<u>Alk</u>
Printed Name / Signature				Date		
a. Author	<u>Mark Wilton</u>			<u>8/12/16</u>		
b. Facility Reviewer (*)	<u>Murphy</u>			<u>8/12/16</u>		
c. NRC Chief Examiner (#)	<u>Phillip G. Capehart / P. Capehart</u>			<u>8/17/16</u>		
d. NRC Regional Supervisor	<u>Gerald J. McCoy / G. McCoy</u>			<u>8/17/2016</u>		
Note: * The facility reviewer's initials or signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initials items in Column "c"; chief examiner concurrence required.						

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	F	3				X								N	E S	Add the word "Both" to the 3 rd bullet. Do you need to identify that the AFW pump is "in the AFW cage"? Are all 3 pumps in the cage? Procedure does not use terminology "ASP transfer switches", should be "T&TV Xfer Switches". D.2 plausibility? Are there any switches where taking it to "LOCAL" cause a start? R: Could confuse local start with local to cause a start.
2	H	3				X								N	E S	A.1 Surge line has low plausibility. Why would PZR level increase on surge line break? R: Change 3 rd bullet to state "indicated" PZR level to make A.1 more plausible.
3	H	3												B	S	
4	H	3												N	E S	Remove "via ECCS or via RHR HXs".
5	H	3				X								N	E S	Is at any time in your procedure does it allow 3 RCPs operating after securing an RCP? If not, A is not plausible. Increase temp to 235 degrees and entered ONOP-41 to make A.1 plausible. Remove "immediately".
6	H	3												M	S	
7	F	3												M	S	
8	H	3												M	S	Does this answer another question? Check for overlap. Verified no overlap.
9	F	2												B	S	
10	F	3												M	S	Doesn't match KA. Licensee stated that this is the transition from tube leak to tube rupture. Agree, SAT.
11	H	2												N	S	
12	H	3												N	S	Double Jeopardy w/ Q26. Will change Q26 to a higher temp to send you to FR-C.1.
13	H	3												B	S	
14	F	3				X								B	S	ECCS is a de-energized to activate system. B & D not very plausible. R: Plant specific detail provided to explain plausibility.
15	F	3												N	S	No procedure support for plausibility statement associated with "high ICW flow". R: Licensee stated thermal barrier flow is an example.

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			
16	H	3												N	E S	A.2 & C.2 plausibility? How does energizing the heaters maintain the PZR level band? R: Plant does not have direction to reduce plant power. Will look to change 2 nd half. Changed PZR htrs to "letdown valves". SAT
17	H	3												M	S	
18	F	2												B	E S	Change SG level to be for Accident conditions to increase LOD? R: 20% and 185 degrees F. Changed made as noted. SAT
19	H	3												N	E S	You state in the 2 nd question "the given Tavq-Tref mismatch". It appears that this is a leading statement and not needed. R: Agree and switch question 1 & 2. SAT
20	H	3												N	S	
21	H	3												N	S	Not sure if enough info is provided to ascertain a dilution is occurring. Isn't there an associated dilution alarm? R: Yes, based on being in Emergency Boration procedure. SAT
22	H	3												N	E S	Bubbles are stated in ONOP-3.03. Reword to remove 3 rd bullet and include in the question. Still needs work. New question gives away the answer. Change to ask what causes a containment isolation alarm and which one causes a containment evacuation alarm. Question revised. Contaminated water spill not plausible. Change to local CAM alarm goes off. Agreed to change to cavity water. Verified changes made to add cavity water to the description of the water spill to increase this distractors plausibility.
23	F	3												B	S	
24	F	3												M	E S	Remove "ready for further response". Removed as requested. 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			
35	F	3												N	Ξ S	Add word "indicates" to 2 nd bullet.
36	H	3												N	S	
37	H	3												N	S	
38	F	3												N	S	
39	F	3												N	Ξ S	Separate each column and change to D to "SI Signal – D"
40	F	3												N	S	
41	H	3												N	⌋ S	Only need to know MSIL criteria to get correct answer and therefore does not meet the KA criteria. Question revised to separate portions of the MSIL signal in a 2X2 format. SAT
42	F	3												N	S	
43	F	3												N	Ξ S	<ul style="list-style-type: none"> Change question to get rid of Rx Trip 2/ Low Tavg to prevent overlap w/ Q#40. Change 1st question to A(n) MSIL signal _____ with choices being "will or will NOT" cause an AFW actuation. REF → update logic Changes made as noted above.
44P	F	3												N	Ξ S	Choices are for Unit 3 but question asks about Unit 4.
45	H	3												B	Ξ S	C1 & D1 not plausible. Change to "lower and stabilize" or "Increase initially than lower".
46	H	3												N	S	
47	F	3												M	⌋ S	2 nd question answers the 1 st question. Fix by asking about vital disc amps. Changes made as noted. 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			
48P	H	2	X			X	X					Y	N	B	E	<p>K/A 063A4.01</p> <p>1. Q=K/A, Q is on RO level.</p> <p>2. Parallelism with distractors C and D: one says "NOT function," and the other says "NOT open," please pick one version for both.</p> <p>3. Could be argued that 'B' is a correct answer because both parts are logically "true," need to "tighten" the stem to ensure the second part Q is specifically giving the <u>reason or cause</u> for the initial response of the breaker.</p> <p>4. Distractor C is non plausible due to the inter-relationships between distractors as follows: the question stem states that it is true that you have lost electrical power (voltage) to the breaker, so why would anyone believe that the undervoltage function of the breaker would not work, given the undervoltage condition?</p> <p>Q as submitted would be technically rated an "E," however it may need extensive revision based upon the distractor inter-relationships as described above.</p> <p>Overlap w/Q#9. Changed Q#9 (SAT now)</p>
49	H	3												M	S	
50	F	3												N	U S	Doesn't meet the KA. Can answer for high alarm not PRM failure. Answer does not agree with answer given in distractor. Changes to the question now match the KA.
51	H	3												N	S	
52	H	3												M	E S	Change C.1 to "Fast Load Reduction" and the ARP to "Fast Load Reduction" procedure. Change D.1 to "Fast Load Reduction". Revised as noted. SAT
53	H	3												N	S	
54	H	3												N	S	
55	F	3												N	S	
56	H	3												N	E S	B not plausible. Change to just voltage. Revised as noted. SAT
57	H	3												N	E S	Checking for operational validity. Confirmed via simulator response.

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			
58	H	3												N	S	
59	F	3												N	S	
60	F	3												M	E S	Change to DCS ONLY or DCS & VPB. Revised as noted. SAT
61	H	3												N	S	Distractor B states you are in a short term TS, clarify this distractor plausibility. Completed SAT.
62	H	3												M	E S	CAPS only
63	H	3												M	E	Why not use "HG Vacuum as read in the MCR? Yes, add "On DCS, ..." Revised as noted. SAT
64	F	3												N	E S	Compare to Q#50. Last bullet not needed. Verify question 50 changed to eliminate overlap with this question. Verified no overlap between the two.
65	H	3												N	E S	Distractor D does not have valve # like other choices. Revised to include valve #. SAT
66	F	3												N	E S	Add, "During Core Alterations", at a minimum... Delete "Core Alts" from the end. C2 & D2 should be SRMs, not Gamma Metrics. Revised as indicated with the exception of gamma metrics. Site confirmed this part is correct.
67	H	3												M	S	
68	F	3												N	E S	<ul style="list-style-type: none"> Possible overlap w/ JPM. Minutia? Why not use CR Evacuation? REF → Update New question written that meets above criteria. SAT
69	H	3												N	S	
70	H	3												N	E S	KA is an "AND". Question only uses Mechanical print. New question uses both prints. 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			
71	F	3												B	U S	Add "HIGH" to 3 rd bullet at the end of the sentence: in HIGH alarm. This question overlaps with a scenario event. B& C are incorrect and are performed in a sim scenario. Maybe key switch. This was in scenario 5. This is a spare scenario and should not be needed. Delete event if not needed.
72	F	3												N	U S	Overlaps with SU scenario. Maybe start above POAH. Feed bypasses / station service. New question still overlaps with scenario. New question written. No longer overlaps with any scenarios.
73	F	3												M	E S	2 nd question is SRO Only. Revise 2 nd question to be at the RO level. If SM not present the RO ____ be required to perform the emergency classification. Revised as noted above. SAT
74	F	3												M	S	
75	F	2	X						X			Y	N	B	U E S	K/A G2.4.3 1. Q=K/A on the second part Q only, Q is RO-level but arguable. 2. MODE is not given in the stem, and would be needed to correctly answer the Q given the intent. First part Q statement is worded awkwardly (saying that a TS LCO makes something a required control board instrument?) 3. First part Q is asking minutia in my opinion, other Chief Examiners may disagree. Argument is as follows: none of the ACTION statements in TS 3.3.3.3 require one hour actions or less, and fundamentally the Q is requiring the applicant to recall the full Table 3.3-5 information from memory. Because none of the ACTION statements are one hour or less, a reference would be required, or it would be SRO-only to know specific information from the Bases. Q as submitted is U due to minutia (requiring applicant to know TS Table 3.3-5 from memory with no reference). Change "relied upon" to "available"? Revised as noted. 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			
76	H	3												N	E S	Condition of Caution statement that the correct answer is based upon is not met. The reactor is not subcritical at this point. No correct answer given. Still need to change 2 nd question to say the reactor is "subcritical". Change to say "Subsequently, the reactor is subcritical".
77	H	3				X								N	E S	Stem states in Mode 4. Two of the choices are for Hot Standby procedure usage. Need to change stem to be in Mode 3. Easy fix so therefore column 7 marked as Enhancement. Revised as noted. SAT
78	H	3				X								N	E S	D.3 plausibility statement for Part 2 is incorrect. This is not an action in the ONOP. No isolation steps in this procedure. Revised question selection to use ONOP-41.3 vs. ONOP-46.4. SAT
79	F	1				X							X	M	U S	Both parts are RO questions; therefore, not SRO only. Rx trip criteria is RO knowledge. D.2 Turbine Brg Temp referenced. There are no temperatures in ONOP-011. Revised during prep week. SAT
80	F	2				X								N	E S	NRCC not used in the procedure, spell out "Ops Center". Is 4 hr. selection for distractor D plausible w/o a reference? If no, need to increase difficulty of question if reference given, otherwise this is a direct lookup. Made editorial change. Question does not require reference to respond correctly per OPS mgmt.
81	H	3				X								M	E S	Question asked for Unit 4 response. Several Unit 3 EOP procedures given as reference. C.2 not plausible, if you choose to go to ECA-1.1, the only way out is to return to the procedure if effect prior to entry which would be ECA-1.2. This is not given as a choice. Revised question to include above choice as choice D.
82	H	3												N	S	
83	H	3												N	E S	Incorrect TS Table given. CHRRMS is given in Table 3.3-5 not 3.3.-4. Remove commas from C & D, not needed. Revised. SAT
84	H	3												N	S U S	Not SRO. 1 hour TS call is RO knowledge. Low LOD. Question changed to ask for different LCO that is not 1 hr and therefore not RO knowledge.
85	H	3												N	E S	Possible overlap with Q81. Asked for licensee to check during validation to ask if applicant used knowledge from Q81 for this question? Added last bullet to lock down the timeline.
86	F	3												N	E S	Licensee to provide procedure source that states "locally" implies "from the control room". Licensee verified use of the word "locally".
87	H	3												N	E S	Is the SU Xfrmr INOP or the EDG? Licensee to verify. Verified

[illegible]

[illegible]

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).

Facility: <u>TURKEY POINT</u>		Date of Exam: <u>09/02/2016</u>		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	<u>M</u>	<u>N/A</u>	<u>AL</u>		
2. Answer key changes and question deletions justified and documented	<u>M</u>	<u>N/A</u>	<u>AL</u>		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<u>M</u>	<u>N/A</u>	<u>AL</u>		
4. Grading for all borderline cases (80 \pm 2% overall and 70 or 80, as applicable, \pm 4% on the SRO-only) reviewed in detail	<u>M</u>	<u>N/A</u>	<u>AL</u>		
5. All other failing examinations checked to ensure that grades are justified	<u>M</u>	<u>N/A</u>	<u>AL</u>		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	<u>M</u>	<u>N/A</u>	<u>AL</u>		
Printed Name/Signature		Date			
a. Grader	<u>MICHAEL MEEKS / Michael Meeks</u>		<u>09/13/2016</u>		
b. Facility Reviewer(*)	<u>N/A</u>		<u>N/A</u>		
c. NRC Chief Examiner (*)	<u>Phillip G. Coghart / P. Coghart</u>		<u>9/14/16</u>		
d. NRC Supervisor (*)	<u>GERARD J. McCoy / J. McCoy</u>		<u>9/14/2016</u>		
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					