

Facility: <u>TURKEY POINT</u>		Date of Examination: <u>JAN 2015</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)	MB
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	MB
-120	3. Facility contact briefed on security and other requirements (C.2.c)	MB
-120	4. Corporate notification letter sent (C.2.d)	MB
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 3)]	MB
{-75}	6. Integrated examination outline(s) due, including Forms ES-201-2, ES-201-3, ES-301-1, ES-301-2, ES-301-5, ES-D-1's, ES-401-1/2, ES-401-3, and ES-401-4, as applicable (C.1.e and f; C.3.d)	MB
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	MB
{-45}	8. Proposed examinations (including written, walk-through JPMs, and scenarios, as applicable), supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, and ES-401-6, and any Form ES-201-3 updates), and reference materials due (C.1.e, f, g and h; C.3.d)	MB
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	MB
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	MB
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	MB
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	MB
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	MB
-7	14. Final applications reviewed; 1 or 2 (if >10) applications audited to confirm qualifications / eligibility; and examination approval and waiver letters sent (C.2.i; Attachment 5; ES-202, C.2.e; ES-204)	MB
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	MB
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	MB
<p>* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.          [Applies only] {Does not apply} to examinations prepared by the NRC.</p>		

Facility: Turkey Point Nuclear (PTN) – Units 3 and 4		Date of Examination: 01/19/2015		
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.	M	me	MB
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled.	M	me	MB
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	M	me	MB
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	M	me	MB
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	me	MB
	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	me	MB
	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	me	MB
3. W / T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form (3) no tasks are duplicated from the applicants' audit test(s) (4) the number of new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	M	me	MB
	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	me	MB
	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	me	MB
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	me	MB
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	M	me	MB
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	M	me	MB
	d. Check for duplication and overlap among exam sections.	M	me	MB
	e. Check the entire exam for balance of coverage.	M	me	MB
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	M	me	MB
a. Author	Mark Wilson / <i>Mark Wilson</i>		Date 10/22/14	
b. Facility Reviewer (*)	MICHAEL COEN / <i>Michael Coen</i>		10/23/14	
c. NRC Chief Examiner (#)	MARK A. BATES / <i>Mark A. Bates</i>		10/29/14	
d. NRC Supervisor	GERALD J. Mc Coy / <i>Gerald J. McCoy</i>		10/29/2014	
Note	# Independent NRC reviewer initial items in Column "c", chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines			

# 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)

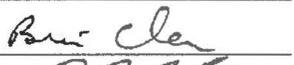
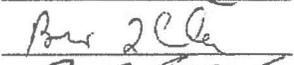
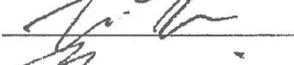
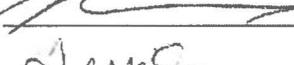
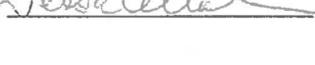
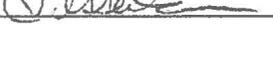
I acknowledge that I have acquired specialized knowledge about the **2015 LOIT (L-15-1) NRC Examination** scheduled for the date(s) of **01/19/15 – 01/30/15** as of the date of my signature. I agree that I will not knowingly divulge any information about this examination to any persons who have not been 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

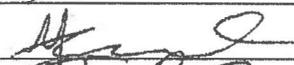
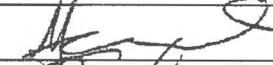
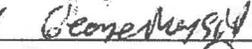
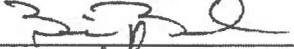
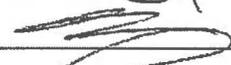
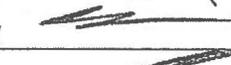
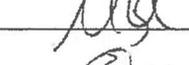
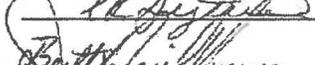
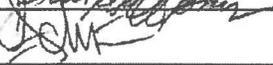
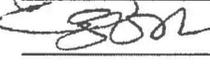
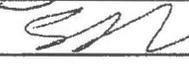
To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the examination administered during the date(s) of **01/19/15 – 01/30/15**. From the date that I entered into this security agreement until completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those individuals who were administered this examination.

02/18/15

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	MICHAEL BEN	Exam Project Ops Supervisor		7/21/14		2/18/15	
2.	Brian Clark	Developer		7/21/14		2/18/15	
3.	Mark Wilson	Exam Project Manager		7/21/14		2/18/15	
4.	Tim Hodge	Developer		7/21/14		5/9/15	
5.	M.A. Slawinski	Developer		7/23/14		2/19/15	
6.	Tessa Callahan	Admin		7/29/14		2/25/15	

MASTER SECURITY AGREEMENT

(Page 2 of 2)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
7.	THOMAS WENOELN	SIM ENGR		7-29-14		8-9-15	
8.	EMMANUELA RESCHI	SIM ENGR		7-29-14		2-24-15	
9.	FRANK LEON	SIM ENGR		7-29-14		2-23-15	
10.	GEORGE MOYSSIDIS	SIM ENGR		8-25-2014		2/23/15	
11.	Bill Busha	Sim I&C		2/25/14		2/24/15	
12.	Alan Schilk	Developer		9/18/14		2/18/15	
13.	RICHARD BAIRD	FLEET OTM		10/14/14		2/27/15	
14.	Jim Tomas	Exam Developer		10/21/14		2/23/15	
15.	Adam Law	Exam Validator		10-27-14		7/9/15	
16.	SEAN BLOOM	Exam Validator		10/28/14		9/6/15	
17.	HUCK SIZENOLF	CRP TRAINING DIRECTOR		11/5/14		2/25/15	
18.	BRETT HOMERER	EXAM VALIDATOR		11-6-14		4-24-15	
19.	A. Gonzalez	Exam Validator		11/6/14		2/10/15	
20.	E. Neville	Exam Validator		11/6/14		3/16/15	

NOTES:

② Signed off via email.  2/25/15

## Unknown

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**From:** Sizemore, Charles  
**Sent:** Wednesday, February 25, 2015 3:04 PM  
**To:** Wilson, Mark; Baird, Richard; 'Ohmstede, Gary T.'; Conder, James  
**Subject:** RE: Please reply to signoff of the PTN NRC Master Security Agreement

That is correct. 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 01/19/15 to 02/18/15. 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.

Chuck Sizemore  
Nuclear Corporate Training Director  
NextEra Energy  
[REDACTED] Office  
[REDACTED] Cell

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**From:** Wilson, Mark  
**Sent:** Wednesday, February 25, 2015 3:01 PM  
**To:** Sizemore, Charles; Baird, Richard; 'Ohmstede, Gary T.'; Conder, James  
**Subject:** Please reply to signoff of the PTN NRC Master Security Agreement

Exam Development Participants,

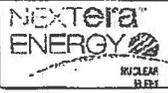
We appreciate your support for Turkey Point's 2015 NRC Exam. We are waiting on NRC's final grading. Please review the statement below and reply in email with the response, "I maintained exam security for Turkey Point's 2015 NRC Exam" for me to sign you off of the Master Agreement.

### 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 01/19/15 to 02/18/15. 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.

Thank You,

Mark Wilson  
[REDACTED]



# MASTER SECURITY AGREEMENT

(Page 3)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
21.	Jay Van Hulzen	Unit Supervisor		11-6-14	①	①	
22.	Ronald Foster	Reactor Operator		11-06-14	①	①	
23.							
* 24.	GARY Ohmstedt	Fleet Exam Mgr		11-10-14	②	2/26/15	
25.							
26.							
27.							
28.							
29.							
30.							
31.							
32.							
33.							
34.							

NOTES:

\* Non badged external reviewer.

① Sign off Master.

② Sign off via email:

## Wilson, Mark

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**From:** Ohmstede, Gary T. <GTOHMSTE@southernco.com>  
**Sent:** Thursday, February 26, 2015 8:52 AM  
**To:** Wilson, Mark  
**Subject:** RE: Please reply to signoff of the PTN NRC Master Security Agreement

This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.

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That is correct. 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 01/19/15 to 02/18/15. 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.

Gary Ohmstede  
Flight Examination Manager  
Southern Nuclear  
31 Inverness Center Pkwy Bin 750  
Birmingham, AL 35242-4809  
[REDACTED]  
[REDACTED]

---

**From:** Wilson, Mark [<mailto:Mark.Wilson@fpl.com>]  
**Sent:** Wednesday, February 25, 2015 3:01 PM  
**To:** Sizemore, Charles; Baird, Richard; Ohmstede, Gary T.; Conder, James  
**Subject:** Please reply to signoff of the PTN NRC Master Security Agreement

Exam Development Participants,

We appreciate your support for Turkey Point's 2015 NRC Exam. We are waiting on NRC's final grading. Please review the statement below and reply in email with the response, "I maintained exam security for Turkey Point's 2015 NRC Exam" for me to sign you off of the Master Agreement.

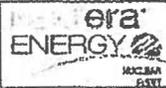
### Post-Examination

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 01/19/15 to 02/18/15. 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.

Thank You,

Mark Wilson





# MASTER SECURITY AGREEMENT

(Page 3)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
21.	Jay Van Hulzen	Unit Supervisor		11-6-14	③	③	
22.	Ronald Foster	Reactor Operator		11-06-14	③	③	
* 23.	JAMES Conder	Supervisor/Industry Peer		11-06-14	②	2/25/15	
24.							
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29.							
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34.							

NOTES:

\* Non badge external reviewer.

- ② Signed off via email. 2/25/15
- ③ Signed off master (N/A).

## Unknown

---

**From:** Conder, James <James.Conder@duke-energy.com>  
**Sent:** Wednesday, February 25, 2015 3:09 PM  
**To:** Wilson, Mark  
**Subject:** RE: Please reply to signoff of the PTN NRC Master Security Agreement

This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email.

---

Mark,

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 \_01/19/15 to 02/18/15. 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.

James Conder  
Supvr- Nuclear Ops Training  
Duke Energy Progress  
3581 West Entrance Road  
Hartsville, SC 29550  
[REDACTED]

MASTER SECURITY AGREEMENT

(Page 3)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
21.	Jay Van Hulzen	Unit Supervisor		11-6-14		2-18-15	
22.	Ronald Foster	Reactor Operator		11-06-14		2-23-15	
23.	①	①	①	①	①	①	①
24.	①	①	①	①	①	①	①
25.	Paul Reimers	Unit Supervisor/SRO		11-11-14		2-23-15	
26.	ED TREMBLAY	US/SRO		11/11/14		2/23/15	
27.	D. Prunier	US/SRO		11-11-14		2-23-15	
28.	N. Michalski	RCO		11-12-14		2-23-15	
29.	R. Strusinski	US		11-17-14		4-6-15	
30.	R. Schoenhals	Unit Supervisor		11/20/14		04/20/15	
31.	S. Bloom	SM/SRO		11/20/14		4/6/15	
32.	Jose A Vasquez	CRS/SRO		11/20/14		4/6/15	
33.	Jose Izquierdo	Rco		11/20/14		4/6/15	
34.	Jesse Enrique	Rco		11/20/14		4/6/15	

NOTES:

① See following sheets for signatures at #23 + #24.

MASTER SECURITY AGREEMENT

(Page 4)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
35.	Christopher Lawrence	RCO		11/20/14		4/20/15	
36.	Joel Fobb	RCO		11/20/14		3/2/15	
37.	T.S. WALL	SM		11/20/14		4/16/15	
38.	MATTHEW GLANON	TRN SUPV		11/20/14		2/18/15	
39.	Greg Perry	RCO		11/24/14		2/19/15	
40.	JUAN GARCIA	SRO		11-24-14		2-14-15	
41.	KEN MAESTRAS	SM		11/24/14		3/20/15	
42.	Peter Meyer	US		11/24/14		4/15/15	
43.	GLENN BURKE	SRO		11/24/14		3/12/15	
44.	C. TOENT	US		11/24/14		3/20/15	
45.	H. KWAN	RCO		11/24/14		4-16-15	
46.	W. BURROWS	SRO		12/2/14		4/20/15	
47.	A. Chomat	SRO		12/2/14		4/20/15	
48.	Juergens	SM		12/2/14		2/19/15	

NOTES:

MASTER SECURITY AGREEMENT

(Page 5)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
49.	Jim Goodrick	SRO / VALIDATOR		12/3/14		2/19/15	
50.	Steve Murano	SRO/Validator		12/3/14		4/14/15	
51.	Nick DeSantis	SRO / Validator		12/3/14		4/29/15	
52.	Robert W Pzell	SRO / Validation		12/4/14		2/23/15	
53.	D Howard	SRO / validation		12-4-14 <del>12-11-14</del>		4-20-15	
54.	S. Choi	RCO / VALIDATION		12/4/14		4/20/15	
55.	C Doty	SRO / Validate		12/15/14		2/20/15	
56.	Alexon Perez	Ricoh / copier tech		1/6/15		3/12/15	
57.	BO NISS	SRO / crowder		2/5/15		2/18/15	
58.	Mike Murphy	SRO		2/6/15		2/23/15	
59.	J Russell	SRO		2/6/15		3/20/15	
60.	Richard Van R. Betts	Sr Lic Op Trar		2/10/15		2/18/15	
61.	VAL MIKLAVSICH	INSTRUCTOR		2/16/15		2/20/15	
62.	Resett Deluz	INSTRUCTOR		2/16/15		2/18/15	

NOTES: ① Signed off via telecon.



# MASTER SECURITY AGREEMENT

(Page 6)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
63.	JEFF MOELLER	INSTRUCTOR	<i>Jeff Moeller</i>	2/18/15	<i>Jeff Moeller</i>	2/19/15	
64.							
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NOTES:



## LIMITED SECURITY AGREEMENT – Operational Exam Only

(Page 1 of 2)

The Limited Security Agreement is used for those personnel having limited knowledge of, without 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 **2015 LOIT (L-15-1) NRC Examination** scheduled for the date(s) of **01/19/15- 01/22/15** 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 **01/19/15- 01/22/15**. 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
1.	<u>Keith Deller</u>	<u>Instructor Sequester</u>		<u>1/16/15</u>		<u>1/22/15</u>	
2.	<u>RS Hess</u>	<u>Ops TRM Mgr / Mgmt obs.</u>		<u>1/16/15</u>		<u>1/22/15</u>	
3.	<u>JEFF MOELLER</u>	<u>INSTRUCTOR / SEQUESTER</u>		<u>1/16/15</u>		<u>1/22/15</u>	
4.	<u>MICLAUSICH, VAL</u>	<u>INSTRUCTOR / SEQUESTER</u>		<u>1/16/15</u>		<u>1/22/15</u>	
5.	<u>B. STAMP</u>	<u>OPS DIR</u>		<u>1-19-15</u>		<u>1-22-15</u>	
6.	<u>Richard Van R. Bette</u>	<u>Instructor / Sequester</u>		<u>1-19-15</u>		<u>01-22/15</u>	



# LIMITED SECURITY AGREEMENT – Operational Exam Only

(Page 2 of 2)

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
7.	HAROLD E. COX	INSTRUCTOR / SEQUESTERER	<i>Harold E. Cox</i>	01/21/15	<i>Harold E. Cox</i>	1/23/15	
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NOTES:

Facility: <b>Turkey Point Units 3 &amp; 4</b>	Date of Examination: <b>01/19/15</b>
Examination Level: RO <input checked="" type="checkbox"/> SRO <input type="checkbox"/>	Operating Test No.: <b>2015-301</b>

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
A.1.a - Conduct of Operations	M, R	2.1.29 (4.1) – Knowledge of how to conduct system lineups, such as valves, breakers, switches, etc.  JPM: Blend To The RWST
A.1.b - Conduct of Operations	D, R	2.1.23 (4.3) – Ability to perform specific system and integrated plant procedures during all modes of plant operation.  JPM: Perform Reactor Coolant System Leak Rate Calculation – Manual Method
A.2 - Equipment Control	N, R	2.2.37 (3.6) – Ability to determine operability and/or availability of safety-related equipment.  JPM: Evaluate Containment Spray Pump Data Sheet
A.3 - Radiation Control	M, R	2.3.5 (2.9) – Ability to use radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc.  JPM: Test Containment High Range Radiation Monitors
A.4 – Emergency Procedures/Plan	N/A	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 Blend To The RWST

This is a modified JPM. The US directs the RO to calculate the makeup to the RWST to clear the RWST Low-Level Alarm by adding blended flow in accordance with 0-OP-046, CVCS - Boron Concentration Control. The RO is directed to use Method 2 for the blended flow calculations. The operator is required to give the boric acid and water flowrates, total volumes, and controller settings as required to makeup to the RWST. 0-OP-046 and the Unit 3 Plant Curve Book (PCB) are provided for reference.

### A.1.b Perform Reactor Coolant System Leak Rate Calculation – Manual Method

This is a bank JPM (02041036102). The operator is provided a list of plant conditions, including steady-state power level with plant computer out of service. Selected actions from 3-OSP-041.1, Reactor Coolant System Leak Rate Calculation, are complete and data is provided for recording and performing calculations. The RCS leak rate calculation uses the manual method via Attachment 3. The operator is required to review results and determine that acceptance criteria are NOT met. 3-OSP-041.1 is provided for reference.

### A.2 Evaluate Containment Spray Pump Data Sheet

This is a new JPM. The crew has performed 3-OSP-068.2, Containment Spray System Inservice Test. The operator is provided Attachment 1, 3A Containment Spray Pump, for review. Vibration results and valve stroke-time are beyond acceptable specified range limits, with other criteria SAT. The operator is required to identify whether the results are satisfactory and list any required actions, if applicable. 3-OSP-068.2 is provided for reference.

### A.3 Test Containment High Range Radiation Monitors

This is a modified JPM. Part 1 - The operator is directed to complete Section 4.8 of 3-OSP-204 (Accident Monitoring Instrumentation Channel Checks), determine that the acceptance criteria for instruments on Vertical Panel C (VPC) are NOT met, and state the appropriate operator response for the conditions given. 3-OSP-204 is provided for this reference. Part 2 – After completion of determining acceptance criteria of the surveillance, the operator is directed to identify the compensatory actions for alternate detection when both Containment High Range Radiation Monitors are inoperable.

### A.4 NOT SELECTED FOR RO EXAM

Facility: <u>Turkey Point Units 3 &amp; 4</u>		Date of Examination: <u>01/19/15</u>
Examination Level: RO <input type="checkbox"/> SRO <input checked="" type="checkbox"/>		Operating Test No.: <u>2015-301</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
A.1.a - Conduct of Operations	N, R	2.1.34 (3.5) – Knowledge of primary and secondary plant chemistry limits. JPM: Review Primary And Secondary Sample Results And Determine Applicable Actions
A.1.b - Conduct of Operations	D, R	2.1.23 (4.4) – Ability to perform specific system and integrated plant procedures during all modes of plant operation. JPM: Perform Reactor Coolant System Leak Rate Calculation – Manual Method
A.2 - Equipment Control	N, R	2.2.37 (4.6) – Ability to determine operability and/or availability of safety-related equipment. JPM: Evaluate Containment Spray Pump Data Sheet and Apply Technical Specifications
A.3 - Radiation Control	N, R	2.3.6 (3.8) – Ability to approve release permits. JPM: Approve Liquid Waste Release Permits
A.4 - Emergency Procedures/Plan	D, R	2.4.41 (4.6) - Knowledge of the emergency action level thresholds and classifications. JPM: Classify Events and Fill Out SNF
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 ( $\leq 3$ for ROs; $\leq 4$ for SROs & RO retakes) (N)ew or (M)odified from bank ( $\geq 1$ ) (P)revious 2 exams ( $\leq 1$ ; randomly selected)		

## JPM SUMMARY STATEMENTS

### A.1.a Review Primary And Secondary Sample Results And Determine Applicable Actions

This is a new JPM. The current power increase is on hold at 55% for 3A Steam Generator Feedwater Pump repair. Chemistry delivers secondary sample results. 0-ADM-651 (Nuclear Chemistry Parameters Manual), 3-ONOP-071.1 (Secondary Chemistry Deviation from Limits), and PTN Technical Specifications are provided for the initial review of chemistry parameters, as needed. For the sample results reviewed, the operator identifies a secondary plant chemistry limit is exceeded and defines the minimum required plant response. With 3A S/G sodium at 300 ppb from the most recent sample, the Action 3 limit is exceeded. Therefore, operators must reduce power below 5% as quickly as safe plant operations permit.

### A.1.b Review Reactor Coolant System Leak Rate Calculation – Manual Method

This is a bank JPM (02041036102). The operator is provided a list of plant conditions, including steady-state power level with plant computer OOS. Selected actions from 3-OSP-041.1, Reactor Coolant System Leak Rate Calculation, are complete and data is provided for recording and performing calculations. The RCS leak rate calculation uses the manual method via Attachment 3. The operator is required to review results, determine that acceptance criteria are NOT met, and inform the Unit Supervisor to comply with TS LCO 3.4.6.2.b - Action b. The unit is required within four hours to reduce leakage to within limits to maintain continued plant operation. PTN Technical Specifications and 3-OSP-041.1 are provided for reference.

### A.2 Evaluate Containment Spray Pump Vibration Data Sheet And Apply Technical Specifications

This is a new JPM. The crew is performing 3-OSP-068.2, Containment Spray System Inservice Test. The operator provides Attachment 1, 3A Containment Spray Pump, for review. Vibration results are beyond acceptable specified range limits with other criteria is sat. The operator is required to identify whether the results are satisfactory and list any required actions, if applicable. PTN Technical Specifications and 3-OSP-068.2 are provided for reference.

### A.3 Approve Liquid Waste Release Permits

This is a new JPM. A radioactive discharge from Waste Monitor Tank A is to be performed, while R-18 (Waste Disposal System Liquid Effluent Monitor) is out of service. The operator is directed to identify any procedural requirements that must be met to commence the release under these conditions. The associated Radioactive Liquid Release Permit contains errors and the operator is required to identify them upon review. 0-NOP-061.11A, Controlled Liquid Release From Waste Monitor Tank A, and the ODCM are provided for reference.

### A.4 Classify Events and Fill Out SNF

This is a bank JPM (02201052311). During an emergency, the operator is provided with a list of plant conditions and directed to classify the event using 0-EPIP-20101 (Duties of the Emergency Coordinator) and issue protective action recommendations using 0-EPIP-20134 (Offsite Notifications and Protective Action Recommendations). The operator is expected to classify the event as a Site Area Emergency, identify the associated PARs, and complete the Florida State Notification Form.

ES-301

Control Room/In-Plant Systems Outline

Form ES-301-2

Facility: <b>Turkey Point Units 3 &amp; 4</b> Exam Level: RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>		Date of Examination: <b>01/19/15</b> Operating Test No.: <b>2015-301</b>
<b>Control Room Systems® (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)</b>		
System / JPM Title	Type Code*	Safety Function
A. 001 Control Rod Drive System [A2.11 - RO 4.4 SRO 4.7] JPM: Recover A Dropped Rod	A, M, S	1
B. 006 Emergency Core Cooling System [A1.13 RO 3.5 SRO 3.7] JPM: Drain The 3B Accumulator For Boron And Level Adjustment	A, M, EN, S	2
C. 006 Emergency Core Cooling System [A4.01 RO 4.1 SRO 3.9] JPM: Terminate Safety Injection	N, S	3
D. 005 Residual Heat Removal System [A2.03 RO 2.9 SRO 3.1] JPM: Respond To A Loss Of RHR	A, D, L, S	4P
E. 045 Main Turbine Generator System [A4.02 RO 2.7 SRO 2.6*] JPM: Synchronize Main Generator To Line (Manual Sync)	D, S	4S
F. 022 Containment Cooling System [A4.01 RO3.6 / SRO3.6] JPM: Start 3A Normal Containment Cooler	N, S	5
G. 015 Nuclear Instrumentation System [A4.01 RO 3.6* SRO 3.6*] JPM: Respond To A Source Range Malfunction	D, L, S	7
H. 008 Component Cooling Water System [A2.01 RO 3.3 SRO 3.6] JPM: Respond To 3A CCW Pump Trip During 3-OSP-030.5, Component Cooling Water Pumps Low Header Pressure Start Test	A, N, S	8

In-Plant Systems <sup>@</sup> (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
I. E12 Uncontrolled Depressurization Of All Steam Generators [EA2.2 RO 3.4 SRO 3.9]  JPM: Respond To A Steam Line Fault Of All S/Gs And Isolate the 3C S/G	N, E	4S
J. APE 056 Loss Of Offsite Power [AA2.14 RO 4.4 SRO 4.6]  JPM: Start, Synchronize, and Load the 4A Emergency Diesel Generator Locally	A, D, E	6
K. 071 Waste Gas Disposal System [A4.26 RO 3.1 SRO 3.9]  JPM: Perform A Gaseous Waste Release	A, D, R	9
<p><sup>@</sup> All RO and SRO-I Control Room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the Control Room.</p>		

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(EN)gineered safety feature	- / - / ≥ 1 (control room system)
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

## TURKEY POINT 2015 NRC EXAM JPM SUMMARY

A. Recovery Of A Dropped Rod

JPM A is a modified bank JPM. Unit 3 is in MODE 1 escalating power when a rod drops. Current power level is 48%. Shutdown Margin is verified adequate for the current plant conditions. I&C has determined and corrected a degraded condition causing the rod to drop. After the Shift Manager gives concurrence, the Unit Supervisor directs the RO to perform Attachment 1 of 3-ONOP-028.3, Dropped RCC. (Alternate Path) When the rod withdraws, a second rod drops requiring the RO to trip the Reactor. The RO continues with Reactor Trip verification.

B. Drain The 3B Accumulator For Boron And Level Adjustment

JPM B is a modified JPM (01064003101). Unit 3 is in MODE 1 with Reactor Power at 100%. The ECCS Accumulator has check valve leakage occurring. The 3B Accumulator is inoperable based on level being too high at about 6,890 gallons and boron too low at about 2,050 ppm. The Unit Supervisor directs the RO to perform 3-NOP-064, Safety Injection Accumulators, Section 5.2 to drain 3B Accumulator to 5,000 gallons for boron addition and a level adjustment. The RO verifies the operability of other accumulators (pressure and level) prior to draining 3B Accumulator. When CV-3-852B, 3B Accumulator Drain Valve, is opened for the 3B Accumulator, the CV-3-852A, 3A Accumulator Drain Valve, also leaks by. The Caution before the draining step states only one drain valve shall be opened at a time. (Alternate Path) With the 3A Accumulator level lowering, the RO closes CV-3-852B which allows the leakage associated with CV-3-852A to stop. The 3A Accumulator low pressure annunciator alarms. The response directs the RO to re-pressurize 3A Accumulator.

C. Terminate Safety Injection

JPM C is a new JPM. Following a common Main Steam Line break from 100% power, the unit trips and Safety Injection actuates. When the MSIVs close on an isolation signal, the fault is isolated. The crew transitions to 3-EOP-ES-1.1, SI Termination while the BOP starts the Prompt Action Verification of 3-EOP-E-0, Reactor Trip response. The US directs the operator to perform actions of 3-EOP-ES-1.1. The operator monitors RCS pressure and the Foldout Page as actions are taken to terminate Safety Injection.

D. Respond To A Loss Of RHR

JPM D is a bank JPM (01050004301). Unit 3 is in MODE 4 with RCS temperature just below 350°F. RHR Shutdown Cooling is in service to maintain current conditions. The RO is directed to maintain current conditions. Subsequently MOV-3-750 for RHR suction fails close, when the RCO tries to reopen the operating RHR Pump amps fall and no flow is indicated. The RCO enters 3-ONOP-050, Loss of RHR, for response. The SNPO is dispatched to check the 3A RHR Pump. The report to the Control Room is the 3A RHR Pump's shaft is sheared. The 3B RHR Pump is started with 3-ONOP-050, Loss of RHR.

E. Synchronize Main Generator To Line (Manual Sync)

JPM E is a bank JPM (01002002100). Unit 3 is in MODE 1 with Reactor Power at 6%. 3-GOP-301, Hot Standby to Power Operation, is in progress. The US directs the RO to manually synchronize the Main Generator to the East Bus. The JPM starts with using the new Turbine Control System (TCS). The RO demonstrates field flashing, transferring from manual to auto voltage control, speed control with using TCS. Once setup conditions are finalized, one Main Generator Breaker is closed and initial load is picked up 10 MWe on the Turbine. If load is not picked up immediately above minimum, then a reverse power relay produces a Main Generator lockout.

F. Start 3B Normal Containment Cooling Fans

JPM F is a new JPM. Unit 3 is in MODE 1 at 100% power. Electrical Maintenance is performing Normal Containment Cooler Breaker maintenance PMs. 3A Normal Containment Cooler is ready for restart. The Unit Supervisor directs restarting 3A Normal Containment Cooler, and then securing 3B Normal Containment Cooler in accordance with 3-NOP-057, Containment Normal Ventilation And Cooling System for testing.

G. Respond To A Source Range Malfunction

JPM G is a bank JPM. Unit 3 is in MODE 3. N32 is selected for audio counts and fails high. 3-ONOP-059.5, Source Range Nuclear Instrumentation, is entered. The Audio Count Rate Channel Selector is selected to the operable channel (N31). Verification of other operable channels occurs (Gamma Metrics). The RO notifies plant personnel of the erroneous Containment Evacuation Alarm. Additional switch manipulations are performed to remove the channel from service.

H. Respond To 3A CCW Pump Trip During 3-OSP-030.5, CCW Pumps Low Header Pressure Start Test

JPM H is a new JPM. Unit 3 is in MODE 1 with Reactor Power at 100%. The US directs the RO to test the 3C CCW Pump in accordance with 3-OSP-030.5, Component Cooling Water Pumps Low Header Pressure Start Test. This test ensures 3A CCW Pump is running. 3C CCW Pump is in Auto. The 3B CCW Pump is disabled by placing in Pull-To-Lock. The line in the field is vented off to simulate a low pressure signal. The alarm for the low pressure comes in, but 3C CCW Pump does not start. (Alternate Path) Concurrently, 3A CCW Pump seizes. The RO must suspend the test to focus on restoration of CCW flow. For success, the 3B CCW or 3C CCW Pump must be manually restarted to restore flow.

I. Respond To A Steam Line Fault Of All S/Gs And Isolate the 3C S/G

JPM I is a new plant JPM. Unit 3 is in MODE 3 following a steamline line rupture outside Containment on CV-3-1608, 3C Steam Dump To Atmosphere Valve. The crew enters 3-EOP-ECA-2.1, Uncontrolled Depressurization of All Steam Generators, for response. The ability to close the MSIVs automatically or manually from the Control Room is lost and S/G pressures continue to lower. The Unit Supervisor directs the operator to establish a secondary pressure boundary at the 3C S/G, starting with POV-3-2606 (3C MSIV) per Attachment 5 (3C S/G Isolation). Since POV-3-2606 is open, supply air to the POV is isolated and vented. As CV-3-1608 is open, local action is taken to close 3-10-003 for isolation.

J. Start, Synchronize, and Load the 4A Emergency Diesel Generator Locally

JPM J is a bank JPM (04023021100). Unit 4 is in MODE 3, following a loss of offsite power. The Control Room restores power to the 4B 4KV Bus, but is unsuccessful in restoring power to the 4A Bus. The Unit Supervisor directs the operator to check the operational status of the 4A EDG and restore power locally, using 4-ONOP-023.2, Emergency Diesel Generator Failure. The operator implements the procedure by placing the Master Control Switch in Local (alternate path), restoring EDG Day Tank level, resetting the Start Failure light, and resetting the lockout relay. When the EDG fails to auto-start, further action is taken to start it using the Emergency Start pushbutton. The EDG starts, but the EDG output breaker does not automatically close. After adjusting EDG frequency, the operator obtains permission from the RO and locally energizes the 4A 4KV Bus.

K. Perform A Gaseous Waste Release

JPM K is a bank JPM (24061006101). Unit 3 and Unit 4 are in MODE 1. The initial steps of 0-NOP-061.14B (Waste Gas Disposal System Controlled Release of Gas Decay Tank B), Attachment 1 (Controlled Release from Gas Decay Tank B) are complete. The Auxiliary Building Ventilation System is in service, as required. The operator is directed by the Unit Supervisor to perform the Auxiliary Building actions for a controlled release from the B Gas Decay Tank, using 0-NOP-061.14B. (alternate path) After initiation, the operator recognizes that pressure in the C Gas Decay Tank is also lowering and takes action to terminate the release, by lowering the RCV-014 hand loader pressure to 0 and verifying that RCV-014 is fully CLOSED.

ES-301

Control Room/In-Plant Systems Outline

Form ES-301-2

Facility: <b>Turkey Point Units 3 &amp; 4</b> Exam Level: RO <input type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>		Date of Examination: <b>01/19/15</b> Operating Test No.: <b>2015-301</b>
<b>Control Room Systems® (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)</b>		
System / JPM Title	Type Code*	Safety Function
A. 001 Control Rod Drive System [A2.11 - RO 4.4 SRO 4.7] JPM: Recover A Dropped Rod	A, M, S	1
B. 006 Emergency Core Cooling System [A1.13 RO 3.5 SRO 3.7] JPM: Drain The 3B Accumulator For Boron And Level Adjustment	A, M, EN, S	2
C. 006 Emergency Core Cooling System [A4.01 RO 4.1 SRO 3.9] JPM: Terminate Safety Injection	N, S	3
D. 005 Residual Heat Removal System [A2.03 RO 2.9 SRO 3.1] JPM: Respond To A Loss Of RHR	A, D, L, S	4P
F. 022 Containment Cooling System [A4.01 RO3.6 / SRO3.6] JPM: Start 3A Normal Containment Cooler	N, S	5
G. 015 Nuclear Instrumentation System [A4.01 RO 3.6* SRO 3.6*] JPM: Respond To A Source Range Malfunction	D, L, S	7
H. 008 Component Cooling Water System [A2.01 RO 3.3 SRO 3.6] JPM: Respond To 3A CCW Pump Trip During 3-OSP-030.5, Component Cooling Water Pumps Low Header Pressure Start Test	A, N, S	8

In-Plant Systems <sup>@</sup> (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
I. E12 Uncontrolled Depressurization Of All Steam Generators [EA2.2 RO 3.4 SRO 3.9]  JPM: Respond To A Steam Line Fault Of All S/Gs And Isolate the 3C S/G	N, E	4S
J. APE 056 Loss Of Offsite Power [AA2.14 RO 4.4 SRO 4.6]  JPM: Start, Synchronize, and Load the 4A Emergency Diesel Generator Locally	A, D, E	6
K. 071 Waste Gas Disposal System [A4.26 RO 3.1 SRO 3.9]  JPM: Perform A Gaseous Waste Release	A, D, R	9
<p><sup>@</sup> All RO and SRO-I Control Room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the Control Room.</p>		

* 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	- / - / $\geq 1$ (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	

## TURKEY POINT 2015 NRC EXAM JPM SUMMARY

A. Recovery Of A Dropped Rod

JPM A is a modified bank JPM. Unit 3 is in MODE 1 escalating power when a rod drops. Current power level is 48%. Shutdown Margin is verified adequate for the current plant conditions. I&C has determined and corrected a degraded condition causing the rod to drop. After the Shift Manager gives concurrence, the Unit Supervisor directs the RO to perform Attachment 1 of 3-ONOP-028.3, Dropped RCC. (Alternate Path) When the rod withdraws, a second rod drops requiring the RO to trip the Reactor. The RO continues with Reactor Trip verification.

B. Drain The 3B Accumulator For Boron And Level Adjustment

JPM B is a modified JPM (01064003101). Unit 3 is in MODE 1 with Reactor Power at 100%. The ECCS Accumulator has check valve leakage occurring. The 3B Accumulator is inoperable based on level being too high at about 6,890 gallons and boron too low at about 2,050 ppm. The Unit Supervisor directs the RO to perform 3-NOP-064, Safety Injection Accumulators, Section 5.2 to drain 3B Accumulator to 5,000 gallons for boron addition and a level adjustment. The RO verifies the operability of other accumulators (pressure and level) prior to draining 3B Accumulator. When CV-3-852B, 3B Accumulator Drain Valve, is opened for the 3B Accumulator, the CV-3-852A, 3A Accumulator Drain Valve, also leaks by. The Caution before the draining step states only one drain valve shall be opened at a time. (Alternate Path) With the 3A Accumulator level lowering, the RO closes CV-3-852B which allows the leakage associated with CV-3-852A to stop. The 3A Accumulator low pressure annunciator alarms. The response directs the RO to re-pressurize 3A Accumulator.

C. Terminate Safety Injection

JPM C is a new JPM. Following a common Main Steam Line break from 100% power, the unit trips and Safety Injection actuates. When the MSIVs close on an isolation signal, the fault is isolated. The crew transitions to 3-EOP-ES-1.1, SI Termination while the BOP starts the Prompt Action Verification of 3-EOP-E-0, Reactor Trip response. The US directs the operator to perform actions of 3-EOP-ES-1.1. The operator monitors RCS pressure and the Foldout Page as actions are taken to terminate Safety Injection.

D. Respond To A Loss Of RHR

JPM D is a bank JPM (01050004301). Unit 3 is in MODE 4 with RCS temperature just below 350°F. RHR Shutdown Cooling is in service to maintain current conditions. The RO is directed to maintain current conditions. Subsequently MOV-3-750 for RHR suction fails close, when the RCO tries to reopen the operating RHR Pump amps fall and no flow is indicated. The RCO enters 3-ONOP-050, Loss of RHR, for response. The SNPO is dispatched to check the 3A RHR Pump. The report to the Control Room is the 3A RHR Pump's shaft is sheared. The 3B RHR Pump is started with 3-ONOP-050, Loss of RHR.

F. Start 3B Normal Containment Cooling Fans

JPM F is a new JPM. Unit 3 is in MODE 1 at 100% power. Electrical Maintenance is performing Normal Containment Cooler Breaker maintenance PMs. 3A Normal Containment Cooler is ready for restart. The Unit Supervisor directs restarting 3A Normal Containment Cooler, and then securing 3B Normal Containment Cooler in accordance with 3-NOP-057, Containment Normal Ventilation And Cooling System for testing.

G. Respond To A Source Range Malfunction

JPM G is a bank JPM. Unit 3 is in MODE 3. N32 is selected for audio counts and fails high. 3-ONOP-059.5, Source Range Nuclear Instrumentation, is entered. The Audio Count Rate Channel Selector is selected to the operable channel (N31). Verification of other operable channels occurs (Gamma Metrics). The RO notifies plant personnel of the erroneous Containment Evacuation Alarm. Additional switch manipulations are performed to remove the channel from service.

H. Respond To 3A CCW Pump Trip During 3-OSP-030.5, CCW Pumps Low Header Pressure Start Test

JPM H is a new JPM. Unit 3 is in MODE 1 with Reactor Power at 100%. The US directs the RO to test the 3C CCW Pump in accordance with 3-OSP-030.5, Component Cooling Water Pumps Low Header Pressure Start Test. This test ensures 3A CCW Pump is running. 3C CCW Pump is in Auto. The 3B CCW Pump is disabled by placing in Pull-To-Lock. The line in the field is vented off to simulate a low pressure signal. The alarm for the low pressure comes in, but 3C CCW Pump does not start. (Alternate Path) Concurrently, 3A CCW Pump seizes. The RO must suspend the test to focus on restoration of CCW flow. For success, the 3B CCW or 3C CCW Pump must be manually restarted to restore flow.

I. Respond To A Steam Line Fault Of All S/Gs And Isolate the 3C S/G

JPM I is a new plant JPM. Unit 3 is in MODE 3 following a steamline line rupture outside Containment on CV-3-1608, 3C Steam Dump To Atmosphere Valve. The crew enters 3-EOP-ECA-2.1, Uncontrolled Depressurization of All Steam Generators, for response. The ability to close the MSIVs automatically or manually from the Control Room is lost and S/G pressures continue to lower. The Unit Supervisor directs the operator to establish a secondary pressure boundary at the 3C S/G, starting with POV-3-2606 (3C MSIV) per Attachment 5 (3C S/G Isolation). Since POV-3-2606 is open, supply air to the POV is isolated and vented. As CV-3-1608 is open, local action is taken to close 3-10-003 for isolation.

J. Start, Synchronize, and Load the 4A Emergency Diesel Generator Locally

JPM J is a bank JPM (04023021100). Unit 4 is in MODE 3, following a loss of offsite power. The Control Room restores power to the 4B 4KV Bus, but is unsuccessful in restoring power to the 4A Bus. The Unit Supervisor directs the operator to check the operational status of the 4A EDG and restore power locally, using 4-ONOP-023.2, Emergency Diesel Generator Failure. The operator implements the procedure by placing the Master Control Switch in Local (alternate path), restoring EDG Day Tank level, resetting the Start Failure light, and resetting the lockout relay. When the EDG fails to auto-start, further action is taken to start it using the Emergency Start pushbutton. The EDG starts, but the EDG output breaker does not automatically close. After adjusting EDG frequency, the operator obtains permission from the RO and locally energizes the 4A 4KV Bus.

K. Perform A Gaseous Waste Release

JPM K is a bank JPM (24061006101). Unit 3 and Unit 4 are in MODE 1. The initial steps of 0-NOP-061.14B (Waste Gas Disposal System Controlled Release of Gas Decay Tank B), Attachment 1 (Controlled Release from Gas Decay Tank B) are complete. The Auxiliary Building Ventilation System is in service, as required. The operator is directed by the Unit Supervisor to perform the Auxiliary Building actions for a controlled release from the B Gas Decay Tank, using 0-NOP-061.14B. (alternate path) After initiation, the operator recognizes that pressure in the C Gas Decay Tank is also lowering and takes action to terminate the release, by lowering the RCV-014 hand loader pressure to 0 and verifying that RCV-014 is fully CLOSED.

ES-301

Control Room/In-Plant Systems Outline

Form ES-301-2

Facility: <b>Turkey Point Units 3 &amp; 4</b>		Date of Examination: <b>01/19/15</b>
Exam Level: RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input checked="" type="checkbox"/>		Operating Test No.: <b>2015-301</b>
<b>Control Room Systems<sup>®</sup> (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)</b>		
System / JPM Title	Type Code*	Safety Function
B. 006 Emergency Core Cooling System [A1.13 RO 3.5 SRO 3.7] JPM: Drain The 3B Accumulator For Boron And Level Adjustment	A, M, EN, S	2
D. 005 Residual Heat Removal System [A2.03 RO 2.9 SRO 3.1] JPM: Respond To A Loss Of RHR	A, D, L, S	4P
G. 015 Nuclear Instrumentation System [A4.01 RO 3.6* SRO 3.6*] JPM: Respond To A Source Range Malfunction	D, L, S	7

In-Plant Systems <sup>@</sup> (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
I. E12 Uncontrolled Depressurization Of All Steam Generators [EA2.2 RO 3.4 SRO 3.9] JPM: Respond To A Steam Line Fault Of All S/Gs And Isolate the 3C S/G	N, E	4S
K. 071 Waste Gas Disposal System [A4.26 RO 3.1 SRO 3.9] JPM: Perform A Gaseous Waste Release	A, D, R	9

<sup>@</sup> All RO and SRO-I Control Room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the Control Room.

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	≤ 9 / ≤ 8 / ≤ 4
(D)irect from bank	≥ 1 / ≥ 1 / ≥ 1
(E)mergency or abnormal in-plant	- / - / ≥ 1 (control room system)
(EN)gineered safety feature	≥ 1 / ≥ 1 / ≥ 1
(L)ow-Power / Shutdown	≥ 2 / ≥ 2 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(P)revious 2 exams	≥ 1 / ≥ 1 / ≥ 1
(R)CA	
(S)imulator	

## TURKEY POINT 2015 NRC EXAM JPM SUMMARY

- B. Drain The 3B Accumulator For Boron And Level Adjustment  
JPM B is a modified JPM (01064003101). Unit 3 is in MODE 1 with Reactor Power at 100%. The ECCS Accumulator has check valve leakage occurring. The 3B Accumulator is inoperable based on level being too high at about 6,890 gallons and boron too low at about 2,050 ppm. The Unit Supervisor directs the RO to perform 3-NOP-064, Safety Injection Accumulators, Section 5.2 to drain 3B Accumulator to 5,000 gallons for boron addition and a level adjustment. The RO verifies the operability of other accumulators (pressure and level) prior to draining 3B Accumulator. When CV-3-852B, 3B Accumulator Drain Valve, is opened for the 3B Accumulator, the CV-3-852A, 3A Accumulator Drain Valve, also leaks by. The Caution before the draining step states only one drain valve shall be opened at a time. (Alternate Path) With the 3A Accumulator level lowering, the RO closes CV-3-852B which allows the leakage associated with CV-3-852A to stop. The 3A Accumulator low pressure annunciator alarms. The response directs the RO to re-pressurize 3A Accumulator.
- D. Respond To A Loss Of RHR  
JPM D is a bank JPM (01050004301). Unit 3 is in MODE 4 with RCS temperature just below 350°F. RHR Shutdown Cooling is in service to maintain current conditions. The RO is directed to maintain current conditions. Subsequently MOV-3-750 for RHR suction fails close, when the RCO tries to reopen the operating RHR Pump amps fall and no flow is indicated. The RCO enters 3-ONOP-050, Loss of RHR, for response. The SNPO is dispatched to check the 3A RHR Pump. The report to the Control Room is the 3A RHR Pump's shaft is sheared. The 3B RHR Pump is started with 3-ONOP-050, Loss of RHR.
- G. Respond To A Source Range Malfunction  
JPM G is a bank JPM. Unit 3 is in MODE 3. N32 is selected for audio counts and fails high. 3-ONOP-059.5, Source Range Nuclear Instrumentation, is entered. The Audio Count Rate Channel Selector is selected to the operable channel (N31). Verification of other operable channels occurs (Gamma Metrics). The RO notifies plant personnel of the erroneous Containment Evacuation Alarm. Additional switch manipulations are performed to remove the channel from service.
- I. Respond To A Steam Line Fault Of All S/Gs And Isolate the 3C S/G  
JPM I is a new plant JPM. Unit 3 is in MODE 3 following a steamline line rupture outside Containment on CV-3-1608, 3C Steam Dump To Atmosphere Valve. The crew enters 3-EOP-ECA-2.1, Uncontrolled Depressurization of All Steam Generators, for response. The ability to close the MSIVs automatically or manually from the Control Room is lost and S/G pressures continue to lower. The Unit Supervisor directs the operator to establish a secondary pressure boundary at the 3C S/G, starting with POV-3-2606 (3C MSIV) per Attachment 5 (3C S/G Isolation). Since POV-3-2606 is open, supply air to the POV is isolated and vented. As CV-3-1608 is open, local action is taken to close 3-10-003 for isolation.
- K. Perform A Gaseous Waste Release  
JPM K is a bank JPM (24061006101). Unit 3 and Unit 4 are in MODE 1. The initial steps of 0-NOP-061.14B (Waste Gas Disposal System Controlled Release of Gas Decay Tank B), Attachment 1 (Controlled Release from Gas Decay Tank B) are complete. The Auxiliary Building Ventilation System is in service, as required. The operator is directed by the Unit Supervisor to perform the Auxiliary Building actions for a controlled release from the B Gas Decay Tank, using 0-NOP-061.14B. (alternate path) After initiation, the operator recognizes that pressure in the C Gas Decay Tank is also lowering and takes action to terminate the release, by lowering the RCV-014 hand loader pressure to 0 and verifying that RCV-014 is fully CLOSED.

Facility: Turkey Point Nuclear (PTN) – Units 3 and 4				Date of Examination: 01/19/15		Operating Test Number: 2015-301	
1. General Criteria			Initials				
			a	b*	c#		
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).		M	M	MB		
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.		M	me	MB		
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)		m	me	MB		
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.		M	me	MB		
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.		M	me	MB		
2. Walk-Through Criteria			--	--	--		
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> <li>• ✓ initial conditions</li> <li>• ✓ initiating cues</li> <li>• ✓ references and tools, including associated procedures</li> <li>• ✓ reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee</li> <li>• ✓ operationally important specific performance criteria that include:                         <ul style="list-style-type: none"> <li>– ✓ detailed expected actions with exact criteria and nomenclature</li> <li>– ✓ system response and other examiner cues</li> <li>– ✓ statements describing important observations to be made by the applicant</li> <li>– ✓ criteria for successful completion of the task</li> <li>– ✓ identification of critical steps and their associated performance standards</li> <li>– ✓ restrictions on the sequence of steps, if applicable</li> </ul> </li> </ul>		M	me	MB		
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.		M	me	MB		
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.			M	me	MB		
	Printed Name / Signature		Date				
a.	Author	Mark Wilson /	1/6/15				
b.	Facility Reviewer(*)	MICHAEL COEN /	1/6/15				
c.	NRC Chief Examiner (#)	MARK A. BATES /	1/8/15				
d.	NRC Supervisor	GERALD S. McCay /	1/8/2015				
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.							

Facility: Turkey Point Nuclear (PTN) – Units 3 and 4

Date of Exam: 01/19/15

Scenario Numbers: 1 / 2 / 3 / 4

Operating Test No.: 2015-301

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.	M	me	MB
2.	The scenarios consist mostly of related events.	M	me	MB
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	M	me	MB
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.	M	me	MB
5.	The events are valid with regard to physics and thermodynamics.	M	me	MB
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	M	me	MB
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.	M	me	MB
8.	The simulator modeling is not altered.	M	me	MB
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	M	me	MB
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.	M	me	MB
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	M	me	MB
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).	M	me	MB
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	M	me	MB
<b>Target Quantitative Attributes (Per Scenario; See Section D.5.d)</b>		<b>Actual Attributes</b>		
<b>Scenario Numbers</b>		1 / 2 / 3 / 4		
1.	Total malfunctions (5–8)	8 / 6 / 8 / 6		
2.	Malfunctions after EOP entry (1–2)	2 / 1 / 2 / 1		
3.	Abnormal events (2–4)	5 / 4 / 5 / 4		
4.	Major transients (1–2)	1 / 1 / 1 / 1		
5.	EOPs entered/requiring substantive actions (1–2)	2 / 1 / 1 / 1		
6.	EOP contingencies requiring substantive actions (0–2)	1 / 0 / 1 / 0		
7.	Critical tasks (2–3)	5 / 3 / 4 / 4		

This information is controlled by PTN's 2015 LOIT (L-15-1) NRC EXAMINATION SECURITY AGREEMENT.

Facility:		Turkey Point Nuclear (PTN) – Units 3 and 4						Date of Exam:			01/19/15			Operating Test No.:			2015-301		
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-15-1-1			L-15-1-2			L-15-1-3			L-15-1-4 (Spare)								
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N								
		S R O	A T C	B O P		R	I	U											
SROU-1	RX	4												1	1	1	0		
	NOR	2*												1	1	1	1		
	I/C	1,3,5,6,8												5	4	4	2		
	MAJ	7												1	2	2	1		
	TS	1,2,3,6												4	0	2	2		
SROU-2	RX	4						1						2	1	1	0		
	NOR	2*						2*						2	1	1	1		
	I/C	1,3,5,6,8						3,4,5,7						9	4	4	2		
	MAJ	7						6						2	2	2	1		
	TS	1,2,3,6						2,3						6	0	2	2		
SROI-1	RX		4		4			1						3	1	1	0		
	NOR		2*		2*			2*						3	1	1	1		
	I/C		3,6		1,3,5,7			3,4,5,7						10	4	4	2		
	MAJ		7		6			6						3	2	2	1		
	TS				3			2,3						3	0	2	2		
RO-1	RX							1						1	1	1	0		
	NOR			4			4							2	1	1	1		
	I/C			1,5,8		1,5		2,4						7	4	4	2		
	MAJ			7		6		6						3	2	2	1		
	TS													0	0	2	2		

Instructions:

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

This information is controlled by PTN's 2015 LOIT (L-15-1) NRC EXAMINATION SECURITY AGREEMENT.

Facility:		Turkey Point		Date of Exam:		01/19/15		Operating Test No.:		2015-301							
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-15-1-1			L-15-1-2			L-15-1-3			L-15-1-4 (Spare)				R	I	U
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N						
		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				
RO-2	RX		4										1	1	1	0	
	NOR		2*						1				2	1	1	1	
	I/C		3,6						3,5, 7				5	4	4	2	
	MAJ		7						6				2	2	2	1	
	TS												0	0	2	2	
RO-3	RX								1				1	1	1	0	
	NOR			4									1	1	1	1	
	I/C			1,5, 8					2,4				5	4	4	2	
	MAJ			7					6				2	2	2	1	
	TS												0	0	2	2	
RO-4	RX					4							1	1	1	0	
	NOR					2*			1				2	1	1	1	
	I/C					3,7			3,5, 7				5	4	4	2	
	MAJ					6			6				2	2	2	1	
	TS												0	0	2	2	

Instructions:

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

Facility: Turkey Point Nuclear (PTN) – Units 3 and 4					Date of Examination: 01/19/15				Operating Test No.: 2015-301			
Competencies	APPLICANTS											
	SRO (U/I)				RO/ATC				BOP			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	1-8	1-7	1-7	1-6	1-8	1-7	1-7	1-6	1-8	1-7	1-7	1-6
Comply With and Use Procedures (1)	1-8	1-7	1-7	1-6	1-8	1-7	1-7	1-6	1-8	1-7	1-7	1-6
Operate Control Boards (2)	NA	NA	NA	NA	2,3, 4,6, 7	2,3, 4,6, 7	1,2,4, 6	1,3, 4,5	1,4, 5,7, 8	1,4,5, 6	1,3,5, 6,7	1,2, 5,6
Communicate and Interact	1-8	1-7	1-7	1-6	1-8	1-7	1-7	1-6	1-8	1-7	1-7	1-6
Demonstrate Supervisory Ability (3)	1-8	1-7	1-7	1-6	NA	NA	NA	NA	NA	NA	NA	NA
Comply With and Use Tech. Specs. (3)	1,2, 3,5	3	2,3	2,3	NA	NA	NA	NA	NA	NA	NA	NA
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.*

The Final Written Exam Sample Plan is a combination of Form ES-401-4 and the originally approved sample plan.

ES-401

Record of Rejected K/As

Form ES-401-4

Tier / Group	Randomly Selected K/A	Reason for Rejection
1 / 1	027 / AA1.05 – RO Exam	<p>The ability to operate and / or monitor the following as they apply to the Pressurizer Pressure Control Malfunctions: Transfer of heaters to backup power supply is not applicable.</p> <p><i>At Turkey Point, a separate backup power supply does not exist for Pressurizer Heaters. However, their respective bus power may be powered from the EDG.</i></p> <p>The NRC authorized a replacement with KA 027 AA1.01.</p>
2 / 2	027 / K2.01 – RO Exam	<p>The knowledge of bus power supplies to the following: Fans is not applicable.</p> <p><i>The Emergency Containment Filtration System was removed during Turkey Point Extended Power Uprate modification. Therefore, this K/A is no longer supported.</i></p> <p>The NRC authorized a replacement with KA 015 K2.01.</p>
2 / 2	075 / K3.07 – RO Exam	<p>The knowledge of the effect that a loss or malfunctions of the circulating water system will have on the following: ESFAS is not applicable.</p> <p><i>At Turkey Point, these two systems are not directly related.</i></p> <p>The NRC authorized a replacement with KA 035 K3.01.</p>
2 / 2	015 / 2.1.30 - SRO Exam	<p>The ability to locate and operate components, including local controls.</p> <p><i>This is a competency at the RO verse the SRO level. Also, local indication for NIs is available at Aux Shutdown Panel, but no control features.</i></p> <p>The NRC authorized a replacement with KA 015 2.1.23. One suggestion involved testing the Refueling SRO aspects.</p>
1 / 2	068 / AA2.10 - SRO Exam	<p>Ability to determine and interpret the following as they apply to the Control Room Evacuation: Source range count rate.</p> <p><i>This is a competency at the RO verse the SRO level. Local indication for NIs is available at Aux Shutdown Panel for the RO to observe. 0-ONOP-105 procedure scope is limited to test this at the SRO level.</i></p> <p>The NRC authorized a replacement with KA 068 2.03. One suggestion involved testing EOP applicability rules.</p>

Facility: Turkey Point Nuclear (PTN) – Units 3 and 4		Date of Exam: 01/19/15		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.	Y	M	MB			
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	N	M	MB			
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	N	M	MB			
4. The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL program office).	N	M	MB			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: ___ the audit exam was systematically and randomly developed; or ___ the audit exam was completed before the license exam was started; or ___ the examinations were developed independently; or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or ___ other (explain)	N	M	MB			
6. Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank	Modified	New	N	M	MB
	RO 349/25 SRO 320/8	98/7 126/3	578/43 52/14			
7. Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/ analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory	C/A	N	M	MB	
	ED 478/35 SRO 320/8	539/140 688/17				
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	N	M	MB			
9. Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.	N	M	MB			
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	N	M	MB			
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.	N	M	MB			
a. Author		Printed Name / Signature		Date		
b. Facility Reviewer (*)		Mark Wilson / [Signature]		02/10/15		
c. NRC Chief Examiner (#)		MICHAEL COEN / [Signature]		2/10/15		
d. NRC Regional Supervisor		MARK A. BATES / [Signature]		2/12/15		
		GERALD J. McCoy / [Signature]		2/12/2015		
Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.						

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			
																<p>General Comment:</p> <p>One non-plausible distractor results in the question being rated as an "E" for enhancement required. The distractor plausibility issue is still required to be fixed, but the question is not "U", or unsat.</p> <p>Two non-plausible distractors cause a rating of "U" and the plausibility concerns are required to be addressed.</p>
																<p>General Comment:</p> <p>When using bank questions, the NUREG requires a random selection from among all the questions that meet that KA. How many NRC exams do you have in your exam bank? What process is used for random selection of those questions? How many questions are in the bank? Having a large number of questions from any one source, particularly from your own plant, can be a concern and will need to be evaluated. Only having specific repeat question requirements for the previous two NRC exams is predicated on the remainder of the bank questions being drawn from a sufficiently large pool of questions and not targeting a small number of recently given NRC exams. Predictability can be a concern even outside of the last two exams.</p> <p>There are 5 repeat questions from the Turkey Point 2010 exam, which appears like a lot from a single exam when following the random selection process for questions that test knowledge of a KA. Discuss.</p>
																<p>General Comment:</p> <p>Only include items in the answer choices that allow four unique answer choices. Adding extra information in the answer choices usually just serves to give the applicant extra methods for eliminating distractors. There is also a danger of missing a KA if the question can be answered by elimination of distractors using information not related to the KA.</p>
																<p>General Comment:</p> <p>Several Questions do not have the field filled in to designate whether the applicant will receive a reference for that question. I am assuming that this indicates that there is no reference, but it would help if these were completed in full for your final submittal.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
																	General Comment: Any time a reference is provided for a question, the exact reference, page numbers, revision numbers, etc should be stated in the question documentation.
																	General Comment: Many plants will include in their question analysis how knowledge of the KA is required to arrive at the correct answer. This is not required, but they tell me that it is a good internal check on K/A match. It also has the potential to streamline the review if the K/A match is not obvious.
																	General Comment: Whenever possible try to tie procedurally required actions to the procedure by including "in accordance with" in the question statement (or "per"). Occasionally there is a reason not to include it, such as when part of what is being tested is actually which procedure should be used.
																	General Comment: A detailed analysis of LOD was not performed. The LOD was evaluated to determine if the LOD was >1 and < 5. In these cases a "2" was entered into this worksheet.
																	General Comment: Many plants will map their SRO questions through the SRO guidance and include a marked up annotated justification of how the question is testing SRO-only knowledge.
1	F	2	x			x								M	E		003K4.07 (2008 DC Cook)  The question statement needs to be reworded because I do not think that procedures are directing the operator to raise VCT pressure in order to control #1 seal leakoff flow. Seal leakoff flow reduction is just a consequence of higher VCT pressure. Suggest, "Raising _____ will result in lower RCP #1 seal leakoff flow."  "D" does not appear to be plausible. What misconception exists that would cause an applicant to think that more seal injection flow will cause a reduction in #1 seal leakoff flow?  All comments resolved. MAB 2/11/2015

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	# units	Backward	Q=K/A	SRO Only				
2	H	2													N	S	004A1.09 Original concern was with subsets and operational validity because RHR is controlling temperature and the operator essentially has no feedback for reactivity effects of temperature and/or boron changes. After discussion, this question has been re-characterized as satisfactory. <b>All comments resolved. MAB 2/11/2015</b>
3	H	2				x									M	■	004K5.43 (2008 Calvert Cliffs) "A" is not plausible. Opening the letdown pressure controller reduces the backpressure and therefore creates a flashing concern. Subcooled does not fit with the first part of the answer to open the valve. "D" is not plausible for similar interplay concerns between the first and second part of the question. <b>All comments resolved. MAB 2/11/2015</b>
4	F	2				x									N	E	005K4.11 There are some plausibility concerns with the first part of the question since CS pressure is below 450F. These concerns would be alleviated if RCS pressure is raised to 475F, which will place it above the conditions required to place RHR in service, but below the pressure which would cause the RHR system to isolate. <b>All comments resolved. MAB 2/11/2015</b>
5	F	2													B	S	006K2.02 (2011 Point Beach)
6	H	2				x									N	■	007A3.01 "C" and "D" both contradict the stem conditions because level is stable and has not changed. Appendix E states that the applicants are not allowed to assume any operator actions have taken place unless the question states that the actions have occurred. In this case, the stem provides no operator action, yet the level has remained stable. To alleviate the conflict, you could just test whether PRT level is controlled automatically or manually, but there may not be a sufficient amount of plausibility for manual control. "B" is not plausible because level has remained stable and automatic level control does not exist with the PRT. If you can show that automatic level control exists, then this distractor may be plausible. <b>All comments resolved. MAB 2/11/2015</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
7	F	1				X								N	■	<p>008A1.02</p> <p>The action should be tied to the procedure that directs the action. I.E. the question statement should read something like, "3-ARP-097.CR.A A3/5, "LTDN DEMIN HI TEMP/FLOW DIVERTED," the RCO is required to manually adjust __ (1) __ to reduce letdown temperature to prevent exceeding the design limits __ (2) __.</p> <p>B(2) and C(2) do not appear to be plausible because the demins get diverted on high temp and that diverted water goes directly to the VCT.</p> <p>D(1) is not plausible because the letdown divert valve serves the purpose of "diverting" not controlling temperature.</p> <p>Discuss whether the question is memory level or higher cog.</p> <p>All comments resolved. MAB 2/11/2015</p>
8	F	2												N	S	010K2.02
9	H	2				x								N	■	<p>012A2.03</p> <p>Does this Q require analysis to arrive at the correct answer? Or is memory level the more appropriate cog level? Discuss.</p> <p>Is there ever a situation where a CIS would get generated without a safety injection. There may be a logical subset issue here where the plant can never get a containment isolation without also getting a safety injection. In other words, if containment isolation was the correct answer to the first part, then safety injection would always be an alternate correct answer. Due to this subset concern, B(1) and D(1) do not appear to be plausible.</p> <p>Will accept KA match.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
10	F	2				x									B	■	<p>012K3.04 (2009 Callaway)</p> <p>Overlap concern with the Q9. From Q9 we learn that two channels are required for safety injection, which also causes a reactor trip. An applicant can carry that information forward to answer this question. Or it could be viewed as double jeopardy, in that, if an applicant did not know the actuation logic to answer Q9, then they could argue that they are being penalized twice with the same knowledge in Q10.</p> <p>Subset issues exist in that a safety injection also causes a reactor trip. Therefore, the interplay between the first and second part of answer choice A is an issue. If one additional channel causes a safety injection, then it will also cause a reactor trip.</p> <p>All comments resolved. MAB 2/11/2015</p>
11	H	2				x									N	U S	<p>013K6.01</p> <p>Overlap concerns with previous two questions for 2 channels being required for SI actuation.</p> <p>Also, two channels is a generic actuation principal for nuclear plant design. A single channel preventing an actuation does not appear to be plausible. Therefore, the credibility of C(1) and D(1) may not be acceptable.</p> <p>All comments resolved. MAB 2/11/2015</p>
12	F	2													B	S	022K2.01 (2009 Harris)
13	F	2				x									N	E	<p>022K3.01</p> <p>Instrument Numbers need to be provided for each of the answer choices.</p> <p>"B" does not appear to be plausible because High Range Rad Monitors intuitively are designed for accidents, therefore they would most definitely be designed for harsh conditions. A different choice for "B" could address this issue.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
14	H	2				x								B	E	026A4.01 (2008 North Anna) Stopping RCPs when CS is not required as stated in "D" does not appear to be plausible. Plausibility justification is based on foldout page criteria, but foldout page criteria requires an analysis of subcooling. "D" plausibility may be brought to an acceptable level if temperatures are provided for the applicant to determine subcooling, or if subcooling values are given. Would it be possible to make subcooling around 30 F? – <i>no needs to be 45F to ensure 1 answer</i> <b>All comments resolved. MAB 2/11/2015</b>
15	F	1				x								N	■	039A3.02 Mode 2 allows the reactor to be critical up to 5% power. Manual closure of MSIVs and Bypass valves are not plausible. Also, the interplay between the first and second parts of the answer choices do not appear to make sense: why would MSIVs close automatically and Bypasses require manual closure? Why would the Bypasses close automatically and the MSIVs require manual isolation? Plausibility in all the distractors appears to be lacking. <b>All comments resolved. MAB 2/11/2015</b>
16	F	2				x								N	■	059A4.03 B(2) and C(2) are not plausible. Turbine power is higher and reactor power is higher – how is it plausible that LESS feedwater is now required to maintain SG levels. The plausibility of these distractors are not at an acceptable level. <b>All comments resolved. MAB 2/11/2015</b>
17	F	2												B	S	059G2.1.28 (2008 North Anna)
18	H	2												B	S	061K5.01 (2008 Sequoyah)
19	F	2												B	S	061K6.02 (2009 Turkey Point) Have the licensee show documentation that supports plausibility of 5900 rpm. According to their plausibility justification, 5900 rpm is the normal speed, but they did not include any documentation that shows that. <b>All comments resolved. MAB 2/11/2015</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
20	H	2													N	S	062G2.2.39
21	F	2													B	S	063K1.02 (2010 Turkey Point)
22	F	2													B	S	063K4.04 (2009 Braidwood)
23	H	2													N	S	064A1.03 How does the VARs get displayed in the control room? Does the gage indicate "out" and "LAG"? The question should reflect indications in the plant.  The parameters being tested need to have indicator numbers, etc., that precisely identify the parameters.  With the above admin items addressed, the Q should be sat. <b>All comments resolved. MAB 2/11/2015</b>
24	F	2													B	S	064K1.04 (2009 Comanche Peak)
25	H	2													N	E	073A2.01 Should the question statement be slightly revised? The first part of the answer choices provide a component status, but the question asks for a required response – this does not seem to fit properly.  Does the second part of the answer choices provide four unique answer choices with only one correct answer? If the answer is yes, then the first part of the answer choice should be deleted.  <b>All comments resolved. MAB 2/11/2015</b>
26	H	2				X									N		076G2.4.31 I am not sure I understand why starting a pump that just tripped would be a credible response when there is a standby pump available. This could be addressed by testing that part of the question in the following manner (or something similar): ...3-ARP-097-CR.I (DOES) / (DOES NOT) state that the next operator action is to start the 3C ICW Pump.  <b>All comments resolved. MAB 2/11/2015</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
27	F	2				x									N	■	078A4.01 80 and 90 psig seems very high to require a reactor trip given that normal air pressure is likely around 100 psig; therefore does not contain enough plausibility. This could easily be resolved by changing the question to a two part question and toggle between 60 and 65 psig for a reactor trip iaw 0-ONOP-013 and then add a second part that tests the closure setpoint for the cross-tie and toggle between 80 and 90 psig. <b>All comments resolved. MAB 2/11/2015</b>
28	H	1				x									B	■	103A2.05 (2009 Millstone 2) The stem tells the applicant that the inner door's integrity is good enough to be within leakrate limits – I.E. it must be operable. The choice is between a door that will not latch and a door within leakrate limits. The selection of LCOs not met also does not provide much plausibility. There is a door that will not latch, but the inner door is maintaining leakage within its limits. It would almost seem that if LCO 3.6.1.2 was not met that it would only be due to LCO 3.6.1.3 not being met. <b>All comments resolved. MAB 2/11/2015</b>
29	H	2				x									N	E	001K6.08 (Pre-review) Question was one of the 10 pre-reviewed. Comments from first review were addressed; however, adjusting the high flux at shutdown setpoint while an evolution is ongoing seems like an obvious wrong answer. This could easily be fixed by using the following: ...If flux continues to rise, B4/1 (DOES) / (DOES NOT) require the operators to initiate emergency boration. <b>All comments resolved. MAB 2/11/2015</b>
30	F	2													N	S	011A4.05

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
31	H	2				x								B	■	<p>017K5.02 (2008 Ginna)</p> <p>The question statement only solicits the "actions" yet all the answer choices contain both an "action" and a "reason". Because the actions are all unique, it appears that none of the "reasons" are necessary in the answer choices. Delete the reasons if there is not a good reason for keeping them. We can also discuss if needed.</p> <p>"A" is not plausible. RCS pressure is already decreasing rapidly, therefore opening a PORV does not sound reasonable. Note that the answer choice does not state SG or Pzr PORV, it just states PORV. Just the fact that the answer choice is not specific enough to identify which PORVs are intended makes the distractor not plausible.</p> <p>"D" is not plausible. Natural Circ is in progress with RCS pressure rapidly going down. Driving head for normal sprays appears to be irrelevant because pressure is way low – the spray valves would be closed anyway – would they not?</p> <p>All comments resolved. MAB 2/11/2015</p>
32	H	2												B	S	<p>015K2.01 (2008 McGuire)</p> <p>Typo in question statement: "A Reactor Trips occurs..."</p> <p>All comments resolved. MAB 2/11/2015</p>
33	H	2												N	S	029A2.01
34	H	2												N	E	<p>041A3.05</p> <p>The second part of "A" and "D" appears to be nothing more than window dressing. Even without these second parts, they are unique answer choices. Adding the second parts just gives the applicants and extra (unnecessary) way to eliminate answer choice A. You should be able to address this with admin wording changes.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
35	H	2												N	E	045A1.06 Why is within 5 F of program wrong. No Load Tave is what the system is "programmed" to maintain and by maintaining at no load Tave, is it not also being maintained with 5 F of the temp for which it is programmed to maintain? Is there a better way to word this to alleviate this concern? <b>All comments resolved. MAB 2/11/2015</b>
36	H	2												B	S	055K1.06 (2010 Seabrook)
37	F	2												N	S	068G2.4.11
38	H	2				x								N	E	035K3.01 "B" is not plausible. An insurge makes no sense with a cooldown. <b>All comments resolved. MAB 2/11/2015</b>
39	H	2				x								N	E	007EK1.02 "stays the same" is not plausible after a reactor trip. It does not pass the common sense test that SDM is eroding as soon as the reactor trips. I could accept something that tests whether SDM is higher or lower at about 18 hours after the trip. Xe should not yet be back to HFP equilibrium xenon level at 18 hours, so therefore SDM would be higher as long as there has not been a cooldown. Applicants could think that SDM would be lower at that point due to xenon decaying and concentration levels decreasing at that time. <b>All comments resolved. MAB 2/11/2015</b>
40	H	2												N	S	009EK1.01

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
41	H	1				x								N	■	<p>011G2.1.20</p> <p>Overlap concern with Q14. This question will tell the applicant that 17 psig in containment will not actuate spray because containment pressure is still rising. This knowledge can then be applied to Q14 to answer the first half of the question (CS not required).</p> <p>The applicants have no reason through any of their training to think that initiating containment spray pre-emptively is acceptable. There would never be a situation (with slightly different plant conditions) where they would pre-emptively initiate spray. Therefore, "C" and "D" are not plausible.</p> <p>"B" would never really be wrong – it is typically never wrong for an operator to verify that CS is not required. Even at full power, it is not wrong for the applicant to look at containment pressure and verify that CS is not needed.</p> <p>"A" not plausible because a peer check is typically not required in the EOPs if there is nobody available to perform a peer check. With a three man crew, many instances are encountered where peer checks cannot be performed due to limited staffing and the urgency of the situation. Because there is no way to analyze the management of the crew resources, there is no way make a judgment even if someone thought that this may have some credibility.</p> <p>All comments resolved. MAB 2/11/2015</p>
42	F	2				x								N	■	<p>015AA1.05</p> <p>"D" is not plausible. A manual reactor trip has not even been attempted.</p> <p>"A" is not plausible. There are no parameters associated with the RCPs even supplied in the stem. There is no information for the applicant to even evaluate which would lead them to believe that an RCP problem exists.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
43	H	2													N	■	<p>022AK3.01</p> <p>The question statement asks what the RCO will do without connecting his actions to any procedural requirements or the subsequent conditions. An RCO might do just about anything. There is also a big clue that seal flow is the parameter of interest because the stem of the question contains seal flows to be analyzed. There are no parameters to analyze to make a determination of throttling charging flow through the Regen Heat Exchanger.</p> <p>"A" is not plausible. The noun name for HCV-3-121 is "charging flow TO the regen heat exchanger." Therefore, closing this valve to raise flow TO the heat exchanger is not credible.</p> <p>"B" is not plausible either based on similar logic as stated above.</p> <p>All comments resolved. MAB 2/11/2015</p>
44	H	2													N	S	025AK2.03
45	H	2				x									N	■	<p>027AA1.01</p> <p>Does the word "approximate" need to be used for the setpoints in the second half of the question? The question analysis states that the PORV will be full open at 92.5%. Does the PORV begin to stroke at exactly 92%?</p> <p>On scale of 0% to 100%, expecting the PORV to open somewhere in the center of this band (42.5%) does not appear to be plausible. For "A" consider using 75%, which according to the supporting material is full open for spray valves.</p> <p>"D" is not plausible. If an applicant thinks they need to lower the output to lower pressure, then 92% for PORV opening does not make sense. There is an interplay issue between the first and second part of the answer choice that causes the distractor to not be credible. Suggest using 30% for "C" and "D".</p> <p>All comments resolved. MAB 2/11/2015</p>
46	H	2													N	S	029EA1.03

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
47	H	2												B	E	038EK3.08 (2009 Point Beach) Reword the question statement because it solicits which action to be taken and two of the choices do not contain any actions. The question should ask for whether or not the RCPs should be secured and then the reason. <b>All comments resolved. MAB 2/11/2015</b>
48	F	2												N	E	055G2.2.38 The first part of the question should be tied to the procedure. I.E. ask for the preferred source of power restoration in accordance with 3-EOP-ECA-0.0. <b>All comments resolved. MAB 2/11/2015</b>
49	H	2				x								N		057AA2.12 Is thermal shock ever a concern for the RHX? If not, then plausibility may not be acceptable. Would it be possible to test whether or not charging flow is required to be reduced to minimum iaw 3-ONOP-003.6? This would require the last bullet to be removed from the question. <b>All comments resolved. MAB 2/11/2015</b>
50	F	2												B	S	058AK1.01 (2010 Turkey Point)
51	F	2				x								N	U E	062G2.4.4 "D" is not plausible. No information in the stem is present to analyze whether or not a problem exists with Traveling Screens. "C" may not be plausible. No information was provided with the question for the reviewer to understand how TPCW Malfunction ONOP is plausible. On the surface pressure appears to be fairly high. What is normal pressure? What are the associated alarms and what are their setpoints? "B" may also not be plausible. No information was provided with the question for the reviewer to understand how CCW Malfunction ONOP is plausible. Again, on the surface pressure appears to be fairly high. What is normal pressure? What are associated alarms and what are their setpoints? <b>All comments resolved. MAB 2/11/2015</b>

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				
52	H	2	x			x									N	U E	<p>077AK3.02</p> <p>Is it operationally valid to only state that TCS MVARs are changing, without telling them how, or in what way, they are changing? Going UP? Going DOWN? OSCILLATING?</p> <p>A lot of extra information may be in the answer choices. The conditions should be stated in the stem, then each answer choice only needs to state (Raise or Lower) and (AC or DC). The reasons seem to be unnecessary.</p> <p>The MINIMUM Excitation Module #5 light is lit as stated in the last bullet in the stem. Therefore the applicant knows that excitation is low. How is lowering voltage plausible when they know excitation is low? "C" and "D" do not appear to be plausible. I do not see a credible misconception that would lead an applicant to think that lowering a voltage regulator setpoint is going to RAISE</p> <p>Are all the conditions in 3-ONOP-090, step 7 stated in the stem in some form?</p>
53	F	2													B	S	E04EK2.1 (2010 Turkey Point)
54	H	2													B	S	E05EK2.2 (2010 Turkey Point)
55	H	2													B	E	<p>E11EA2.1 (2009 Callaway) (Pre-review)</p> <p>Z.1 provides the direction to operate CS iaw ECA-1.1. What are the conditions for a Red/Orange path on containment? With pressure so high, I assume they are in the procedure, but I just want to verify that since the supporting documentation for the first part of the question appears to be Z.1.</p> <p>I do not see any supporting documentation for the second part of the question. Discuss.</p> <p>All comments resolved. MAB 2/11/2015</p>
56	H	2													B	S	E12EA2.2 (Ginna)

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				
57	H	2				x									N	■	001AA2.05 (Pre-review) "A" and "C" are not credible for two reasons. (1) "reduce turbine load at a <u>slower</u> rate." "Slower" is a comparative term. Slower than what? Turbine load is not being lowered in the stem. (2) Reducing turbine load will raise Tave and Tave is already high. "B" is not plausible because the question asks for a singular action and "B" provides two different evolutions. This could be corrected by using just the first action. <b>All comments resolved. MAB 2/11/2015</b>
58	F	2													N	S	028AK3.03 (Pre-review)
59	F	2				x									N	E	051AA1.04 "A" does not contain enough credibility. An emergency down power is in progress. The first action in the GOP, before doing anything else, would not be pull rods. This choice could be replaced by "Place rods to manual." <b>All comments resolved. MAB 2/11/2015</b>
60	H	2													B	S	060AA1.02 (2008 Sequoyah)
61	F	2													B	E	068AK2.07 (2009 Point Beach) Question analysis states that "B" is correct, but the correct answer appears to be designated as "D". Conflict needs to be resolved. <b>All comments resolved. MAB 2/11/2015</b>
62	F	2											x		N	■	076G2.4.46 KA not being tested. Everything above the fill in the blank statements can be deleted. The only knowledge needed for answer the question is whether I-131 and Co-60 are indicative of fuel failures. The KA requires testing whether alarms are consistent with plant conditions. <b>All comments resolved. MAB 2/11/2015</b>

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			
63	H	2												B	E	E02EK3.4 (2009 Seabrook) Question statement needs to solicit the operator response and reason for that response. <b>All comments resolved. MAB 2/11/2015</b>
64	H	2												N	E	E08EK1.1 (Pre-review) Change 19F to 28F. This will allow for a better distractor because even if someone does not realize adverse containment, they would know that 19F would not be the earliest subcooling temp, because the limit is 29F. Otherwise, the question should be fine. <b>All comments resolved. MAB 2/11/2015</b>
65	H	2												N	S	E10EA2.1
66	H	2				x								B	E	G2.1.3 "A" is not plausible. Safety Functions are only meaningful while in EOPs. There are no conditions in the stem indicating that EOPs are in use. Where is the Minimum Equipment List kept? Is it a book kept in a certain place? Is it in the control room? <b>All comments resolved. MAB 2/11/2015</b>
67	H	2													E	G2.1.42 (2010 Turkey Point) "D" is not defined. What minimum time? This is very vague. To ensure accuracy of the correct answer more specific wording must be used. Consider something along the lines of: "The reactor has not been subcritical for the minimum required time to allow fuel moves in the reactor." <i>Q replaced.</i> <b>All comments resolved. MAB 2/11/2015</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
68	F	2				x		X					x	B	■	<p>G2.2.17 (2012 Point Beach)</p> <p>These approvals are specific to the SRO position. It is RO knowledge to understand that it is not his responsibility, but it is an SRO knowledge item to know that it is the SM's responsibility.</p> <p>Control of protected equipment would always be the responsibility of licensed operators. None of the non-licensed positions are credible.</p> <p>All comments resolved. MAB 2/11/2015</p>
69	F	2				x		X					x	B	E	<p>G2.2.18</p> <p>"A" is not plausible for a loops filled requirement. It would be plausible for a loop to be considered operable iaw tech specs, but not loops filled.</p> <p>Is this knowledge required of the RO position and job function? Or is this SRO-only knowledge?</p> <p>All comments resolved. MAB 2/11/2015</p>
70	F	2				x								N	■	<p>G2.3.12</p> <p>"C" is not plausible because "B" is a subset of "C". In other words, if "C" was a correct answer, then "B" would also be a correct answer. If operators are required to immediately exit the Spent Fuel Pool Area, then they would likewise also be suspending fuel transfer movements. Leaving the area is just another way of saying that movements are no longer occurring. Also, if the area is immediately vacated, then the assembly in the cart would be left as-is – which is horizontal (the lowest possible position).</p> <p>"D" is not plausible because continuing core offload after looking at does with a pocket dosimeter seems to not be credible. If the licensee can show that they can use pocket dosimetry to compensate for installed rad monitors in similar situations, then the plausibility may be acceptable.</p> <p>All comments resolved. MAB 2/11/2015</p>
71	F	2						X					x	B	E	<p>G2.3.13 (2010 Turkey Point)</p> <p>This appears to be SRO-only information. We would typically allow this as an SRO-only item because containment entry is an approval that occurs at an organizational level high than the RO position.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
72	H	2		x		x		X							N	■	<p>G2.3.14</p> <p>What role does a licensed operator have for performing the three evolutions mentioned in the distractors? If the operator has no job responsibilities associated with any of these answer choices, then that particular choice is not operationally valid. (Particularly concerned with "C" and "D")</p> <p>A cue exists in that only one task involves Operations doing something. The other tasks are for workers from other departments. It appears to be a cue that this exam is designed to test things associated with the Operator's job responsibilities.</p> <p>All comments resolved. MAB 2/11/2015</p>
73	F	2				x									B	E	<p>G2.4.13 (2009 Turkey Point)</p> <p>Are "C" and "D" essentially the same answer choice? By the time ES-1.4 has been reached has F-0 already been performed well before then?</p> <p>All comments resolved. MAB 2/11/2015</p>
74	F	2						x							B	E	<p>G2.4.25</p> <p>Is this knowledge required of the RO position?</p> <p>All comments resolved. MAB 2/11/2015</p>
75	H	2				x									N	E	<p>"A" does not appear to be credible as they have not even exited E-0. In other words, they have not even made their first diagnosis.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
76	F	1				x							x		N	■	013G2.2.25 K/A requires testing specific LCO / safety limit basis information that is specific to the Engineered Safeguards System. Just about all the requirements in Tech Specs are used to ensure that the plant remains within the safety analysis calculations.  "C" is one of those statements that is never wrong. When is it ever wrong to comply with the safety analysis? These types of statements, that are practically speaking – always correct, tend to injure the plausibility of the other distractors.  Furthermore, to think that the analytical methodology is specific to a specific parameter, such as SG overfill/level, or RCS pressure, does not fit with the question statement. The question statement is asking for an answer that relates to the methodology for determining limits. This causes "B" and "D" to not be plausible for an additional reason.  All comments resolved. MAB 2/11/2015
77	H	2	x			x		x						x	B	■	039G2.4.45 (2012 Point Beach) The question can be answered based only on RO knowledge and making an assessment of plant response to determine the most pressing concern. Steam/Feed mismatch will result in a reactor trip, therefore, with systems knowledge the question can be answered. How do the operators know the color of the alarm? Question statement should tie the answer to the procedure (iaw ADM-219). One suggestion to hit K/A at SRO level would be to test a radioactive steam release's impact on the E-Plan.  All comments resolved. MAB 2/11/2015
78	H	2													N	S	063A2.02 (Pre-review)
79	H	2												x	B	■	076A2.02 Question is not SRO-only. As stated in the NRC's SRO-only Clarification Guidance, "SRO-only knowledge should not be claimed for questions that can be answered solely using fundamental knowledge of plant parameters that require direct entry to major EOPs; e.g. E-0."  All comments resolved. MAB 2/11/2015

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
80	F	2											x	B	■	<p>103A2.03 (2009 Comanche Peak)</p> <p>The question does not appear to test the K/A at the SRO-only level. The second part is SRO-only, but it does not test the K/A. The second part can simply be asked as, "What position can approve exceeding 10 CFR 20 limits?" This has nothing to do with a malfunctioning containment system.</p> <p>The first part of the question can be answered by knowing systems information and the definition in Tech Specs for containment integrity.</p> <p>The question statement needs to be tied to the document that supports the answer. It is quite possible that Tech Specs and Procedures can have different requirements for isolating a containment penetration. Not attaching a procedure to the question statement opens doors for multiple correct answers.</p> <p>All comments resolved. MAB 2/11/2015</p>
81	F	2				x		x						B	E	<p>002G2.2.22 (Pre-review)</p> <p>"B" is not plausible because the leakage has not been stated in the stem. The applicant is required to make an assumption on whether leakage is above or below 1 gpm. NUREG-1021 APP E does not allow the applicants to make assumptions, yet this answer choice requires an assumption. If the applicant assumes that leakage is already (it is only a pinhole) below 1 gpm, then reducing leakage is not credible.</p> <p>To choose between "C" and "D", the applicant needs to have greater than 1 hour action statements committed to memory. Are you applicants required to know greater than 1 hour action statements from memory? If so, which ones? Do you have a learning objective for this?</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
82	H	2	x										x	B	■	<p>015G2.1.23 (2009 Comanche Peak)</p> <p>The last bullet states that "no other alarms occurred." Is that an operationally valid statement? With the malfunction described, are there absolutely no other alarms that occur?</p> <p>The actions are all different in the second half of the question. Does this mean that the question can be answer solely on the actions that are required? If so, then the first part of the question should be deleted since it is not needed to arrive at the correct answer.</p> <p>C(2) does not contain any actions that would mitigate something – it only contains a verification. Therefore, C(2) does not answer the question as written.</p> <p>Not SRO-only. RO knowledge can be used to diagnose the cause of the event. Abnormal/Off-normal operating procedure entry conditions and symptoms are RO knowledge. Diagnosing an event or equipment malfunction is also RO knowledge.</p> <p>All comments resolved. MAB 2/11/2015</p>
83	H	2						x						N	E	<p>068A2.04</p> <p>Are you applicants required to know greater than 1 hour action statements from memory? If so, which ones? Do you have a learning objective for this?</p> <p>Do the assumptions in the COLR also play into the LOCA assumptions? In other words, is there an interpretation of B(2) and C(2) that could be correct?</p> <p>All comments resolved. MAB 2/11/2015</p>
84	F	2				x							x	N	■	<p>007EA2.02</p> <p>Using systems knowledge alone "B" can be disqualified as a distractor.</p> <p>Both "C" and "D" occur as a result of a cooldown, therefore making them both subsets of "A". This causes both to not be plausible. Due to the subset issue, it also leaves no distractors that require SRO-only knowledge to analyze.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
85	H?	2				x							x	B	■	<p>025AA2.02 (2011 Point Beach)</p> <p>The LOK was not included with the question. It looked like it might have been cut off at the bottom of the page by the printer.</p> <p>Improper procedure titles are given for the procedures being tested. This is not operationally valid. Once the correct procedure titles are listed, will the question still work?</p> <p>The containment sump is going up and containment particulate monitor is in alarm. B(2) and C(2) do not appear plausible.</p> <p>Not SRO-only knowledge. Systems knowledge can be used to determine the leak location and ONOP entry criteria (and procedure titles) are RO knowledge.</p> <p>All comments resolved. MAB 2/11/2015</p>
86	H	2												N	E	<p>026G2.1.19</p> <p>The question states "REFERENCE PROVIDED." The supporting documentation states, "Proposed References to be provided to applicants during examination: No." The one single page is attached that states, "STUDENT REFERENCE" at the top. I assume that it is only this one page that is intended for the applicant to receive with his exam. If an entire procedure or section of a procedure is to be provided, then it will need to be reviewed in great detail to ensure that it does not impact another part of the exam. This just needs to be clarified.</p> <p>Assuming only the one page that is labeled as "STUDENT REFERENCE," is to be provided, are your applicants required to know greater than 1 hour reportability requirements from memory? Do you have a learning objective for this?</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
87	H	2												N	E	<p>029EA2.05</p> <p>Overlap concerns with Q46. From Q46, applicants can take away that LCV-155-C is a correct choice when BA pumps are off. This can then be applied to this question to point the applicant in the direction of 356. The overlap concerns cut two ways – one is that knowledge can be applied from one question to another, but also an applicant can argue that he/she suffered double jeopardy by not knowing one of the test items. In any case, this question likely has too much overlap. Discuss.</p> <p>In the question documentation specifically list each page and revision of the documents that you intend on providing to the applicant.</p> <p>All comments resolved. MAB 2/11/2015</p>
88	H	2	x											B	E	<p>056 G2.1.31 (2009 Turkey Point)</p> <p>The question states "REFERENCE PROVIDED." The supporting documentation states, "Proposed References to be provided to applicants during examination: No."</p> <p>Why does the question ask for the "order" to be give? Why does it not just solicit the required operator action? Wording something as if the SRO directs an action does not change the knowledge needed to answer the question and therefore has no bearing on whether the question is at the SRO-only level.</p> <p>Does the stem of the question need to state where the operators are in the ONOP? With the way the question is written, there will be no correct answer if the initial action in the ONOP is not opening the 4B RCP Breaker.</p> <p>All comments resolved. MAB 2/11/2015</p>
89	F	2	x									x		N	■	<p>062G2.4.20</p> <p>Not SRO-only. Question can be answered with only systems knowledge.</p> <p>Will there be any ambiguity as to which CAUTION is being tested.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
90	H	1												N	■	<p>028G2.4.21</p> <p>In the question documentation specifically list each page and revision of the documents that you intend on providing to the applicant.</p> <p>LOD=1. With the reference, this question does not discriminate at the appropriate level.</p> <p>All comments resolved. MAB 2/11/2015</p>
91	H	2											x	B	■	<p>068AA2.10 (2008 Harris)</p> <p>Not SRO-only. The second part of the question is testing SRO knowledge with the E-Plan, but that part of the question does not meet the K/A; therefore, the randomly selected K/A is not being tested at the SRO level.</p> <p>For which unit are the subsequent conditions?</p> <p>The first part does not involve procedure selection. It appears to only test the Note in the ONOP.</p> <p>Who is assigned to go to the Alternate Shutdown Panel during control room evacuation? I am assuming that ROs will be performing the cooldown and need to know the conditions that would require the cooldown to be halted.</p> <p>It appears that the first part has four unique answer choices. Is any knowledge in the second part of the question needed to arrive at the correct answer?</p> <p>All comments resolved. MAB 2/11/2015</p>
92	H?	2												B	E	<p>E07G2.4.6 (2011 Ginna)</p> <p>LOK not provided with Question. I assume it to be comprehensive/analysis.</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
93	H	2												B	E	<p>E10EA2.2 (2010 Farley)</p> <p>What step of ES-0.2 is being performed in the stem? Would the applicant be wrong if they assumed that ES-0.2 had just been entered and they indicated that it is correct to continue in ES-0.2 until they reach the NOTE that you supplied prior to Step 15?</p> <p>100F should be used instead of 25F if that is the correct for current version of ES-0.2. It would seem that because ES-0.2 is incorrect, that 100F may be the better distractor. Otherwise, you are just giving the applicants additional reasons to disqualify answer choices. Discuss.</p> <p>Is p2r level rising enough to diagnose that a steam void in the vessel is present?</p> <p>All comments resolved. MAB 2/11/2015</p>
94	H	2	x											N	E	<p>G2.1.29</p> <p>Question statement only solicits whether subsequent steps may be performed, yet the answer choices provide a reason in addition to the yes/no (may/may not) solicitation. Question statement needs to parallel the information in the answer choices.</p> <p>Help me understand how/why the Operations Director is plausible. The answer choice analysis does not mention Operations Director.</p> <p>Is "D" incorrect? Would subsequent steps be allowed to be performed if SI/RHR flowpaths were affected?</p> <p>All comments resolved. MAB 2/11/2015</p>
95	F	2				x								B	■	<p>G2.1.9 (2009 Braidwood)</p> <p>The senior license level is the Shift Manager – how is it plausible that someone would have a higher level of authority? C(2) and D(2) do not appear to be plausible.</p> <p>A good fit at the SRO level for KA is fuel movement authority and approvals for complications during fuel movements. Do you have some provisions for moving fuel when a SR NI is out?</p> <p>All comments resolved. MAB 2/11/2015</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				
96	H	2					x						x		N	■	<p>G2.2.2</p> <p>Going beyond 24 hours requires a risk assessment. The stem does not state that a risk assessment has been performed. Is the correct answer "B"? Is there potentially more than one correct answer? Stating in the stem that a risk assessment has been done may be a big cue that 24 hours is not correct.</p> <p>KA does not appear to be tested. The question only tests when the pump must be declared inoperable – this does not test any manipulation of control consoles. If you were to test when they are required to be in Mode 3, then I could see that as a KA match because control manipulations would need to be made to place the plant in mode 3.</p> <p>All comments resolved. MAB 2/11/2015</p>
97	F	2				x									B	■	<p>G2.2.43 (2009 Wolf Creek)</p> <p>OP-AA-100-1000, Attachment 15, states that removing an alarm from service will be reviewed and authorized by an SRO, typically the CRS or Shift Manager. This does not appear to support the correct answer. The correct answer states that the Shift Manager is the LOWEST level of authority to remove the alarm from service. This procedure states that the CRS also typically does it, but does not preclude ANY SRO from approving the removal from service.</p> <p>Operations Manager appears to be a major inconvenience for approval of an inoperable alarm that could present itself any time day or night. Spurious alarms seem to be a relatively low level issue to require such a high level of authority. A more acceptable choice would be between ANY SRO or the Shift Manager.</p> <p>The second part of the answer choices should be stripped down to the differences in the answer choices. One way to do this would be to test whether EOOS Index (IS) or (IS NOT) required to be completed.</p> <p>This question looks like it can be fixed if the above comments are incorporated.</p> <p>All comments resolved. MAB 2/11/2015</p>



Facility: <u>TURKEY POINT</u> Date of Exam: <u>02/18/2015</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>MD</u>	<u>N/A</u>	<u>MB</u>
2. Answer key changes and question deletions justified and documented	<u>MD</u>	<u>N/A</u>	<u>MB</u>
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	<u>MD</u>	<u>N/A</u>	<u>MB</u>
4. Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail	<u>MD</u>	<u>N/A</u>	<u>MB</u>
5. All other failing examinations checked to ensure that grades are justified	<u>MD</u>	<u>N/A</u>	<u>MB</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>MD</u>	<u>N/A</u>	<u>MB</u>
	Printed Name/Signature		Date
a. Grader	<u>Michael G. Donithon / M.G. Donithon</u>		<u>3/9/2015</u>
b. Facility Reviewer(*)	<u>N/A</u>		
c. NRC Chief Examiner (*)	<u>MARK A. BATES / Mark A. Bates</u>		<u>3/9/2015</u>
d. NRC Supervisor (*)	<u>GERALD J. McGeary / Gerald J. McGeary</u>		<u>3/13/2015</u>
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.			