

Facility: VC SummerDate of Examination: 8/19/13Developed by: Written - Facility ☒ NRC ☐ // Operating - Facility ☒ NRC ☐

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	Ⓟ
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	Ⓟ
-120	3. Facility contact briefed on security and other requirements (C.2.c)	Ⓟ
-120	4. Corporate notification letter sent (C.2.d)	Ⓟ
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 3)]	Ⓟ
{-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)	Ⓟ
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	Ⓟ
{-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)	Ⓟ
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	Ⓟ
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	Ⓟ
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	Ⓟ
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	Ⓟ
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	Ⓟ
-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)	Ⓟ
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	Ⓟ
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	Ⓟ

* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.

[Applies only] {Does not apply} to examinations prepared by the NRC.

Facility:		Date of Examination:		
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.	NA	NA	Ø
	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.	↓	↓	Ø
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	↓	↓	Ø
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	↓	↓	Ø
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.	Ø	Ø	Ø
	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.	Ø	Ø	Ø
	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.	Ø	Ø	Ø
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.	Ø	Ø	Ø
	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	Ø	Ø	Ø
	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.	Ø	Ø	Ø
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.	Ø	Ø	Ø
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	Ø	Ø	Ø
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	Ø	Ø	Ø
	d. Check for duplication and overlap among exam sections.	Ø	Ø	Ø
	e. Check the entire exam for balance of coverage.	Ø	Ø	Ø
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	Ø	Ø	Ø
a. Author		Robert Johnston		Date 8/15/13 8/15/13 8/15/13 8/15/13
b. Facility Reviewer (*)		Nikol Okina		
c. NRC Chief Examiner (#)		KENNETH SCHAEFER		
d. NRC Supervisor		MARK FRANKE		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines				

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 8/19/13 and 8/26/13 and 9/2/13 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 8/19/13, 8/26/13, 9/2/13. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC 8/19/13, 8/26/13, 9/2/13

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. Randy Todd	CRS	<i>[Signature]</i>	2/15/13	<i>[Signature]</i>	9-10-13
2. Eugene W. Smith	Instructor	<i>[Signature]</i>	2-18-13	<i>[Signature]</i>	9-11-13
3. Michael T. Johnson	CRS	<i>[Signature]</i>	3-5-13	<i>[Signature]</i>	9-12-13
4. Matt Torres	CRS/SE	<i>[Signature]</i>	3-5-13	<i>[Signature]</i>	9-12-13
5. D. Allen Williams	RD	<i>[Signature]</i>	3-13-13	<i>[Signature]</i>	9-12-13
6. C. Price	SS	<i>[Signature]</i>	3-13-13	<i>[Signature]</i>	9-12-13
7. Jesse Galloway	RO	<i>[Signature]</i>	4-8-13	<i>[Signature]</i>	9-12-13
8. Jesse Galloway	CRS	<i>[Signature]</i>	4-8-13	<i>[Signature]</i>	9-12-13
9. Jason Paulsen	RO	<i>[Signature]</i>	4-9-13	<i>[Signature]</i>	9-12-13
10. BOA-S	RO	<i>[Signature]</i>	4-28-13	<i>[Signature]</i>	9-10-13
11. LEAD Smith	CRS	<i>[Signature]</i>	4-28-13	<i>[Signature]</i>	9-10-13
12. Robbie Crain	RO	<i>[Signature]</i>	4-28-13	<i>[Signature]</i>	9-10-13
13. Mike Kennedy	SE	<i>[Signature]</i>	4-28-13	<i>[Signature]</i>	9-10-13
14. Doug Edwards	SS	<i>[Signature]</i>	4-30-13	<i>[Signature]</i>	9-16-13
15. Randall Razzell	RO	<i>[Signature]</i>	5-5-13	<i>[Signature]</i>	9-1-13

NOTES:

ES-201

Examination Security Agreement

Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 8/19/13 and 8/26/13 as of the date 9/2/13 of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 8/19/13, 8/26/13, 9/2/13. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC. 8/19/13, 8/26/13, 9/2/13

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. <u>Tea-13 Molekash</u>	<u>NC</u>	<u>[Signature]</u>	<u>5-20-13</u>	<u>[Signature]</u>	<u>9-10-13</u>
2. <u>Steve Williams</u>	<u>SR0</u>	<u>[Signature]</u>	<u>5-20-13</u>	<u>[Signature]</u>	<u>9-12-13</u>
3. <u>David Dabkowski</u>	<u>SR0</u>	<u>[Signature]</u>	<u>6-12-13</u>	<u>[Signature]</u>	<u>9-17-13</u>
4. <u>Pick Gager</u>	<u>SR0 - OPS TRAINING</u>	<u>[Signature]</u>	<u>6-12-13</u>	<u>[Signature]</u>	<u>9-17-13</u>
5. <u>Scott Porter</u>	<u>Sup - Training Support</u>	<u>[Signature]</u>	<u>6-12-13</u>	<u>[Signature]</u>	<u>9-17-13</u>
6. <u>Tara Tolbert</u>	<u>Clerk</u>	<u>[Signature]</u>	<u>6-28-13</u>	<u>[Signature]</u>	<u>9/10/13</u>
7. <u>Robert Justice</u>	<u>OPS MGR</u>	<u>[Signature]</u>	<u>7/23/13</u>	<u>[Signature]</u>	<u>9/11/12</u>
8. <u>Eric Warden</u>	<u>SR0 - KARMA</u>	<u>[Signature]</u>	<u>7/29/13</u>	<u>[Signature]</u>	<u>9/4/13</u>
9. <u>M. Karaman</u>	<u>SR0</u>	<u>[Signature]</u>	<u>7-30-13</u>	<u>[Signature]</u>	<u>9-16-13</u>
10. <u>GREG ERVIN</u>	<u>SR0</u>	<u>[Signature]</u>	<u>7-30-13</u>	<u>[Signature]</u>	<u>9-16-13</u>
11. <u>MIKE MOSLEY</u>	<u>SR0</u>	<u>[Signature]</u>	<u>7-30-13</u>	<u>[Signature]</u>	<u>9-16-13</u>
12. <u>ANTHONY LEDBETTER</u>	<u>SR0</u>	<u>[Signature]</u>	<u>8/12/13</u>	<u>[Signature]</u>	<u>9-16-13</u>
13. <u>Sean Keener</u>	<u>Training Supervisor</u>	<u>[Signature]</u>	<u>8/19/13</u>	<u>[Signature]</u>	<u>9/12/13</u>
14. <u>RANDY RUFF</u>	<u>Instructor</u>	<u>[Signature]</u>	<u>8/19/13</u>	<u>[Signature]</u>	<u>9/12/13</u>
15. <u>Ray Taffa</u>	<u>Instructor</u>	<u>[Signature]</u>	<u>8-19-13</u>	<u>[Signature]</u>	<u>9-12/13</u>

NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 8/19/13 and 8/26/13 as of the date 8/12/13 of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. <u>Matthew A. Bender</u>	<u>Exam Writer</u>	<u>Matthew A. Bender</u>	<u>10/20/12</u>	<u>Matthew A. Bender</u>	<u>8/9/13</u>
2. <u>Robert Johnston</u>	<u>Exam Writer</u>	<u>Robert Johnston</u>	<u>10/20/12</u>	<u>Robert Johnston</u>	<u>9/9/13</u>
3. <u>Richard Goldstein</u>	<u>Exam Writer</u>	<u>Richard Goldstein</u>	<u>10/15/12</u>	<u>Richard Goldstein</u>	<u>9/9/13</u>
4. <u>Nicole Okimochi</u>	<u>OP/GR</u>	<u>Nicole Okimochi</u>	<u>11/12/12</u>	<u>Nicole Okimochi</u>	<u>9/12/13</u>
5. <u>Jody Lawler</u>	<u>Chief Sim Eng Sup</u>	<u>Jody Lawler</u>	<u>11/26/12</u>	<u>Jody Lawler</u>	<u>9/9/13</u>
6. <u>Linda Stewart</u>	<u>Sim Eng</u>	<u>Linda Stewart</u>	<u>2/26/13</u>	<u>Linda Stewart</u>	<u>9/9/13</u>
7. <u>JOEY BROOKS</u>	<u>SIM ENGINER</u>	<u>JOEY BROOKS</u>	<u>11/25/12</u>	<u>JOEY BROOKS</u>	<u>9/9/13</u>
8. <u>MITCHELL YOUNG</u>	<u>Simulator Consultant</u>	<u>MITCHELL YOUNG</u>	<u>11-29-12</u>	<u>MITCHELL YOUNG</u>	<u>9/11/13</u>
9. <u>MIKE SAUNDERS</u>	<u>SIM OPS SPECIALIST</u>	<u>MIKE SAUNDERS</u>	<u>11-29-12</u>	<u>MIKE SAUNDERS</u>	<u>9/9/13</u>
10. <u>Bill Tucker</u>	<u>Sr Faccess Control Analyst</u>	<u>Bill Tucker</u>	<u>11/29/12</u>	<u>Bill Tucker</u>	<u>9/9/13</u>
11. <u>Larry Hanner</u>	<u>SIM OPS SPEC</u>	<u>Larry Hanner</u>	<u>11/29/12</u>	<u>Larry Hanner</u>	<u>9/11/13</u>
12. <u>Bill Harris</u>	<u>Sim Eng</u>	<u>Bill Harris</u>	<u>11/29/12</u>	<u>Bill Harris</u>	<u>9/11/13</u>
13. <u>MIKE WILLIS</u>	<u>PO / VALIDATOR</u>	<u>MIKE WILLIS</u>	<u>9-18-13</u>	<u>MIKE WILLIS</u>	<u>9-2-13</u>
14. <u>Jim McLean</u>	<u>SRO VALIDATOR</u>	<u>Jim McLean</u>	<u>9/10/13</u>	<u>Jim McLean</u>	<u>9-2-13</u>
15. <u>Matt Crawford</u>	<u>SRO VALIDATOR</u>	<u>Matt Crawford</u>	<u>2/14/13</u>	<u>Matt Crawford</u>	<u>9-2-13</u>
NOTES: <u>William H. Bay Jr</u>	<u>SRO VALIDATOR</u>	<u>William H. Bay Jr</u>	<u>05/21/13</u>	<u>William H. Bay Jr</u>	<u>09/09/13</u>

1. Pre-Examination

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. Scott Richardson	Ops Instructor	<i>[Signature]</i>	8/19/13	<i>[Signature]</i>	9/9/13
2. Hest Mertins	Ops Inst	<i>[Signature]</i>	8/19/13	<i>[Signature]</i>	9-9-13
3. Steve Reitz	Ops Instructor	<i>[Signature]</i>	8/20/13	<i>[Signature]</i>	9-9-13
4. Keith Hicher	Ops Instructor	<i>[Signature]</i>	8/20/13	<i>[Signature]</i>	9/9/13
5. Matthew Leander	Ops Instructor	<i>[Signature]</i>	8/20/13 *	<i>[Signature]</i>	9/18/13
6. Darren Wokurka	Ops Instructor	<i>[Signature]</i>	8/24/13	<i>[Signature]</i>	9/2/13
7. Jason Wosniak	Ops Instructor	<i>[Signature]</i>	8/21/13	<i>[Signature]</i>	9/2/13
8. Lesley Dinsmore	Ops Instructor	<i>[Signature]</i>	8/21/13	<i>[Signature]</i>	9/9/13
9. Ty Sharp	Ops Instructor	<i>[Signature]</i>	9/9/13	<i>[Signature]</i>	9/9/13
10. Harry Mertins					
11.					
12.					
13.					
14.					
15.					

NOTES:

GOLDSTEIN, RICHARD

From: DUHAIME, DAVID M
Sent: Tuesday, September 17, 2013 8:02 PM
To: GOLDSTEIN, RICHARD
Subject: RE: NRC Exam Security Agreement

I have complied. DD

From: GOLDSTEIN, RICHARD
Sent: Tuesday, September 17, 2013 12:24 PM
To: DUHAIME, DAVID M
Subject: NRC Exam Security Agreement

You have been sent this email because you have not yet signed off of the V.C Summer ILO 11-01 NRC Security agreement. You must attest that you did not divulge exam-related information in accordance with the following statement from NUREG-1021, form ES-201-3 :

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 8/19/13, 8/26/13, 9/2/13. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

Please certify that you complied with this statement by responding to this email.

Richard Goldstein
OPERATIONS TRAINING
OFFICE: (803) 345-4173

GOLDSTEIN, RICHARD

From: CRAWFORD, MATTHEW
Sent: Thursday, September 12, 2013 7:38 AM
To: GOLDSTEIN, RICHARD
Subject: RE: NRC Exam Security Agreement

I have complied with this statement

From: GOLDSTEIN, RICHARD
Sent: Thursday, September 12, 2013 7:19 AM
To: CRAWFORD, MATTHEW
Subject: NRC Exam Security Agreement

You have been sent this email because you have not yet signed off of the V.C Summer ILO 11-01 NRC Security agreement. You must attest that you did not divulge exam-related information in accordance with the following statement from NUREG-1021, form ES-201-3:

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 8/19/13, 8/26/13, 9/2/13. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

Please certify that you complied with this statement by responding to this email.

Richard Goldstein
Operations Training
Office (803) 345-4173
ext 54173

Facility: VC SUMMER	Date of Examination: 8/19/2013
Examination Level (circle one): RO / SRO	Operating Test Number: NRC ILO-11-01

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations (A1-a)	D,P	Calculate Head Venting Time in accordance with EOP-18.2, Response to Voids in Reactor Vessel, Attachment 2. K/A: 2.1.25 (RO:3.9, SRO:4.2)
Conduct of Operations (A1-b)	D	Manually calculate QPTR with a dropped control rod in accordance with STP-108.001. K/A: 2.1.37 (RO:4.3, SRO:4.6)
Equipment Control (A2)	N	Perform a boric acid flowpath operability verification in accordance with STP-104.003. K/A: 2.2.12 (RO: 3.7, SRO:4.1)
Radiation Control (A3)	M	RO/SRO Common Calculate stay times for various workers in accordance with HPP-0153 and determine who can do the work. K/A: 2.3.4 (RO:3.2, SRO:3.7)
Emergency Plan (A4)		Not selected for RO.

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)

Facility: VC SUMMER	Date of Examination: 8/19/2013
Examination Level (circle one): RO / SRO	Operating Test Number: NRC ILO-11-01

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations (A1-a)	M	Review NIS Power Range Heat Balance in accordance with STP-102.002. K/A: 2.1.45: (RO:4.3, SRO:4.3)
Conduct of Operations (A1-b)	M	Manually calculate QPTR with a dropped control rod in accordance with STP-108.001. K/A: 2.1.37 (RO:4.3, SRO:4.6)
Equipment Control (A2)	N	Review an "A" train Control room Emergency Air Cleanup System Operability Test in accordance with STP-124.001. K/A: 2.2.12 (RO: 3.7, SRO:4.1)
Radiation Control (A3)	M	RO/SRO Common Calculate stay times for various workers in accordance with HPP-0153 and determine who can do the work. K/A: 2.3.4 (RO:3.2, SRO:3.7)
Emergency Plan (A4)	D	Declare an Alert in accordance with EPP-001. K/A: 2.4.41 (RO:2.9, SRO: 4.6)

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

Facility: VC Summer		Date of Examination: 8/19/2013	
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: NRC ILO-11-01	
Control Room Systems (8 for RO; 7 for SRO-I 2 or 3 for SRO-U)			
System / JPM Title	Type Code*	Safety Function	
a. Generic Abnormal Plant Evolution 001 [NJPSF-141A] Continuous Rod Withdrawal (AOP-403.3, EOP-1.0, E-0)	A,L,M,S	1	
b. System 022 [NJPSF-159] Swap running RBCU's (SOP-114)	A,EN,N,S	5	
c. System 004 [NJPS-034A] Increase Letdown Flow to a Maximum to Improve Chemistry (SOP-102)	D,S	2	
d. Generic Emergency Plant Evolution 038 [NJPSF-059B] Alternate Isolation of Ruptured S/G (MSIV fails to close) (EOP-4.0/E-3)	A,D,S	3	
e. System 005 [NJPS-151] Shift RHR Loops with RHR in service (SOP-115)	D,L,S	4P	
f. System 059 [NJPSF-161] Respond to a feed regulating valve closure (AOP-210.1)	A,N,S	4S	
g. System 062 [NJPS-162] Start and Load the Main Generator (SOP-301)	N,S	6	
h. System 103 [NJPS-152] Respond to high reactor building pressure (SOP-114)	D,S	8	
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i. Generic Abnormal Plant Evolution 068 [JPPF-013A/B] Start and load the diesel generator during control room evacuation (AOP-600.1)	A,E,N	8	
j. Generic Abnormal Plant Evolution 040 [JPP-107A] Locally Close and De-Energize MS Loop "B" and "C" to the Turbine Driven Emergency Feedwater Pump (EOP-3.0, E-2)	M,E	4S	
k. Generic Emergency Plant Evolution 055 [JPPF-066A] Locally Isolate RCP Seals During a Total Loss of ESF Power (EOP-6.0, ECA-0.0)	E,M,R	6	

@ All control room (and in-plant) systems must be different and serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

* Type Codes	Criteria for:	RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3	5
(C)ontrol room		
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$	4
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$	3
(EN)gineered safety feature	NA / NA / ≥ 1	
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$	2
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$	7
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$	0
(R)CA	$\geq 1 / \geq 1 / \geq 1$	1
(S)imulator		

Facility: VC Summer		Date of Examination: 8/19/2013	
Exam Level (circle one): RO SRO(I) SRO(U)		Operating Test No.: NRC ILO-11-01	
Control Room Systems (8 for RO; 7 for SRO-I 2 or 3 for SRO-U)			
System / JPM Title		Type Code*	Safety Function
a.	Generic Abnormal Plant Evolution 001 [NJPSF-141A] Continuous Rod Withdrawal (AOP-403.3, EOP-1.0, E-0)	A,L,M,S	1
b.	System 022 [NJPSF-159] Swap running RBCU's (SOP-114)	A,EN,N,S	5
c.	System 004 [NJPS-034A] Increase Letdown Flow to a Maximum to Improve Chemistry (SOP-102)	D,S	2
d.	Generic Emergency Plant Evolution 038 [NJPSF-059B] Alternate Isolation of Ruptured S/G (MSIV fails to close) (EOP-4.0/E-3)	A,D,S	3
e.	System 005 [NJPS-151] Shift RHR Loops with RHR in service (SOP-115)	D,L,S	4P
f.	System 059 [NJPSF-161] Respond to a feed regulating valve closure (AOP-210.1)	A,N,S	4S
g.	System 062 [NJPS-162] Start and Load the Main Generator (SOP-301)	N,S	6
h.	Not selected for the SRO-I		
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i.	Generic Abnormal Plant Evolution 068 [JPPF-013A/B] Start and load the diesel generator during control room evacuation (AOP-600.1)	A,E,N	8
j.	Generic Abnormal Plant Evolution 040 [JPP-107A] Locally Close and De-Energize MS Loop "B" and "C" to the Turbine Driven Emergency Feedwater Pump (EOP-3.0, E-2)	M,E	4S
k.	Generic Emergency Plant Evolution 055 [JPPF-066A] Locally Isolate RCP Seals During a Total Loss of ESF Power (EOP-6.0, ECA-0.0)	E,M,R	6

<p>@ All control room (and in-plant) systems must be different and serve different safety functions; in-plant systems and functions may overlap those tested in the control room.</p>		
* Type Codes	Criteria for:	RO <u>SRO-I</u> SRO-U
(A)lternate path	4-6 / 4-6 / 2-3	5
(C)ontrol room		
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$	3
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$	3
(EN)gineered safety feature	NA / NA / ≥ 1	
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$	2
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$	7
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$	0
(R)CA	$\geq 1 / \geq 1 / \geq 1$	1
(S)imulator		

Facility: VC Summer		Date of Examination: 8/19/2013	
Exam Level (circle one): RO / SRO(I) / SRO(U)		Operating Test No.: NRC ILO-11-01	
Control Room Systems (8 for RO; 7 for SRO-I 2 or 3 for SRO-U)			
System / JPM Title	Type Code*	Safety Function	
a. Generic Abnormal Plant Evolution 001 [NJPSF-141A] Continuous Rod Withdrawal (AOP-403.3, EOP-1.0, E-0)	A,L,M,S	1	
b. System 022 [NJPSF-159] Swap running RBCU's (SOP-114)	A,EN,N,S	5	
c. Not selected for the SRO-U			
d. Not selected for the SRO-U			
e. Not selected for the SRO-U			
f. Not selected for the SRO-U			
g. Not selected for the SRO-U			
h. Not selected for the SRO-U			
In-Plant Systems (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i. Generic Abnormal Plant Evolution 068 [JPPF-013A/B] Start and load the diesel generator during control room evacuation (AOP-600.1)	A,E,N	8	
j. Generic Abnormal Plant Evolution 040 [JPP-107A] Locally Close and De-Energize MS Loop "B" and "C" to the Turbine Driven Emergency Feedwater Pump (EOP-3.0, E-2)	M,E	4S	
k. Generic Emergency Plant Evolution 055 [JPPF-066A] Locally Isolate RCP Seals During a Total Loss of ESF Power (EOP-6.0, ECA-0.0)	E,M,R	6	

@ All control room (and in-plant) systems must be different and serve different safety functions; in-plant systems and functions may overlap those tested in the control room.		
* Type Codes	Criteria for:	RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3	3
(C)ontrol room		
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$	0
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$	3
(EN)gineered safety feature	NA / NA / ≥ 1 (control room system)	1
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$	1
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$	5
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)	0
(R)CA	$\geq 1 / \geq 1 / \geq 1$	1
(S)imulator		

Facility:		Date of Examination:		Operating Test Number:	
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).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
2. Walk-Through Criteria		--	--	--	
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> initial conditions initiating cues references and tools, including associated procedures reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee operationally important specific performance criteria that include: <ul style="list-style-type: none"> detailed expected actions with exact criteria and nomenclature system response and other examiner cues statements describing important observations to be made by the applicant criteria for successful completion of the task identification of critical steps and their associated performance standards restrictions on the sequence of steps, if applicable 	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
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.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Printed Name / Signature		Date			
a.	Author <u>Robert Johnston</u>	<u>8/8/13</u>			
b.	Facility Reviewer(*) <u>Douglas Edwards</u>	<u>8/8/13</u>			
c.	NRC Chief Examiner (#) <u>James O. Schaefer</u>	<u>8/14/13</u>			
d.	NRC Supervisor <u>MARK FRANK</u>	<u>8/15/13</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

Facility: VC Summer Date of Exam: 8/19/2013 Scenario Numbers: 1 / 2 / 3 / S Operating Test No.: NRC ILO 11-01				
QUALITATIVE ATTRIBUTES		Initials		
		a	b*	c#
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
2.	The scenarios consist mostly of related events.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
3.	Each event description consists of <ul style="list-style-type: none"> the point in the scenario when it is to be initiated the malfunction(s) that are entered to initiate the event the symptoms/cues that will be visible to the crew the expected operator actions (by shift position) the event termination point (if applicable) 	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
5.	The events are valid with regard to physics and thermodynamics.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
8.	The simulator modeling is not altered.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<i>[initials]</i>	<i>[initials]</i>	<i>[initials]</i>
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes 1 / S / 2 / 3	-	-
1.	Total malfunctions (5-8)	6 / 8 / 7 / 6	<i>[initials]</i>	<i>[initials]</i>
2.	Malfunctions after EOP entry (1-2)	1 / 2 / 2 / 1	<i>[initials]</i>	<i>[initials]</i>
3.	Abnormal events (2-4)	4 / 4 / 4 / 4	<i>[initials]</i>	<i>[initials]</i>
4.	Major transients (1-2)	1 / 1 / 1 / 1	<i>[initials]</i>	<i>[initials]</i>
5.	EOPs entered/requiring substantive actions (1-2)	1 / 1 / 1 / 1	<i>[initials]</i>	<i>[initials]</i>
6.	EOP contingencies requiring substantive actions (0-2)	0 / 0 / 0 / 1	<i>[initials]</i>	<i>[initials]</i>
7.	Critical tasks (2-3)	3 / 2 / 2 / 2	<i>[initials]</i>	<i>[initials]</i>

Facility: VC SUMMER		Date of Exam: 08/19/2013		Operating Test No.: NRC ILO 11-01														
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 (*)			
		1			2			3			4							
		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					
Bemis, Andrew	RO	RX	1											1	1	1	0	
	<input checked="" type="checkbox"/> SRO-I	NOR				1						1	2	1	1	1		
	<input type="checkbox"/> SRO-U	I/C	3 5			2 3						4 6	6	4	4	2		
	<input type="checkbox"/>	MAJ	6			6						7	3	2	2	1		
	<input type="checkbox"/>	TS											0	0	2	2		
Garrett, Craig	RO	RX										4	1	1	1	0		
	<input checked="" type="checkbox"/> SRO-I	NOR		1									1	1	1	1		
	<input type="checkbox"/> SRO-U	I/C		2 3 4							3 5		5	4	4	2		
	<input type="checkbox"/>	MAJ		6							7		2	2	2	1		
	<input type="checkbox"/>	TS											0	0	2	2		
Holcombe, Terry	RO	RX	1										1	1	1	0		
	<input checked="" type="checkbox"/> SRO-I	NOR						1				1	2	1	1	1		
	<input type="checkbox"/> SRO-U	I/C	3 5					3 4				4 6	6	4	4	2		
	<input type="checkbox"/>	MAJ	6					6				7	3	2	2	1		
	<input type="checkbox"/>	TS											0	0	2	2		
Johnson, Steve	RO	RX										4	1	1	1	0		
	<input checked="" type="checkbox"/> SRO-I	NOR		1									1	1	1	1		
	<input type="checkbox"/> SRO-U	I/C		2 3 4							3 5		5	4	4	2		
	<input type="checkbox"/>	MAJ		6							7		2	2	2	1		
	<input type="checkbox"/>	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: VC SUMMER		Date of Exam: 08/19/2013		Operating Test No.: NRC ILO 11-01														
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 (*)			
		1			2			3			4							
		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					
Kline, Ross	RO	RX				1									1	1	1	0
	<input checked="" type="checkbox"/>	NOR			1						1				2	1	1	1
	SRO-I	I/C			2 3 4		2 5				3 4				7	4	4	2
	<input type="checkbox"/>	MAJ			6		6				6				3	2	2	1
	<input type="checkbox"/>	TS													0	0	2	2
Newman, Nathan	RO	RX							1						1	1	1	0
	<input checked="" type="checkbox"/>	NOR					1								1	1	1	1
	SRO-I	I/C					2 3		2 5						4	4	4	2
	<input type="checkbox"/>	MAJ					6		6						2	2	2	1
	<input type="checkbox"/>	TS													0	0	2	2
Snipes, Ron	RO	RX				1									1	1	1	0
	<input checked="" type="checkbox"/>	NOR									1				1	1	1	1
	SRO-I	I/C					2 5				3 4				4	4	4	2
	<input type="checkbox"/>	MAJ					6				6				2	2	2	1
	<input type="checkbox"/>	TS													0	0	2	2
Zimmerman, Elvis	RO	RX							1						1	1	1	0
	<input checked="" type="checkbox"/>	NOR					1								1	1	1	1
	SRO-I	I/C					2 3		2 5						4	4	4	2
	<input type="checkbox"/>	MAJ					6		6						2	2	2	1
	<input type="checkbox"/>	TS													0	0	2	2

Instructions:

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

Facility: VC SUMMER		Date of Exam: 08/19/2013		Operating Test No.: NRC ILO 11-01													
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 (*)		
		1			2			3			4						
		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				
Blue, Brandon	RO					1								1	1	1	0
	<input type="checkbox"/> SRO-I													1	1	1	1
	<input checked="" type="checkbox"/> SRO-U	2 3 5				2 5								5	4	4	2
	MAJ	6				6								2	2	2	1
	TS	2 3 5												3	0	2	2
King, Robbie	RO							1						1	1	1	0
	<input type="checkbox"/> SRO-I													1	1	1	1
	<input checked="" type="checkbox"/> SRO-U	2 3 5						2 5						5	4	4	2
	MAJ	6						6						2	2	2	1
	TS	2 3 5												3	0	2	2
Rachals, Bert	RO		1											1	1	1	0
	<input type="checkbox"/> SRO-I					1								1	1	1	1
	<input checked="" type="checkbox"/> SRO-U		3 5			2 3 5								5	4	4	2
	MAJ		6			6								2	2	2	1
	TS					2 4 5								3	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: VC SUMMER		Date of Exam: 08/19/2013		Operating Test No.: NRC ILO 11-01														
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 (*)			
		1			2			3			4							
		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					
Fisher, Dan	RO	RX													0	1	1	0
	<input type="checkbox"/> SRO-I	NOR				1									1	1	1	1
	<input type="checkbox"/> SRO-U	I/C				2 3 5						3 4 5 6			7	4	4	2
	<input checked="" type="checkbox"/> SRO-U	MAJ				6						7			2	2	2	1
	<input checked="" type="checkbox"/> SRO-U	TS				2 4 5						2 3			5	0	2	2
Geib, James	RO	RX													0	1	1	0
	<input type="checkbox"/> SRO-I	NOR						1							1	1	1	1
	<input type="checkbox"/> SRO-U	I/C						2 3 4 5				3 4 5 6			8	4	4	2
	<input checked="" type="checkbox"/> SRO-U	MAJ						6				7			2	2	2	1
	<input checked="" type="checkbox"/> SRO-U	TS						3 5				2 3			4	0	2	2
Rhymer, Danny	RO	RX													0	1	1	0
	<input type="checkbox"/> SRO-I	NOR	1					1							2	1	1	1
	<input type="checkbox"/> SRO-U	I/C	2 3 5					2 3 4 5							7	4	4	2
	<input checked="" type="checkbox"/> SRO-U	MAJ	6					6							2	2	2	1
	<input checked="" type="checkbox"/> SRO-U	TS	2 3 5					3 5							5	0	2	2
Seabrook, Kem	RO	RX													0	1	1	0
	<input type="checkbox"/> SRO-I	NOR				1		1							2	1	1	1
	<input type="checkbox"/> SRO-U	I/C				2 3 5		2 3 4 5							7	4	4	2
	<input checked="" type="checkbox"/> SRO-U	MAJ				6		6							2	2	2	1
	<input checked="" type="checkbox"/> SRO-U	TS				2 4 5		3 5							5	0	2	2

Instructions:

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

Facility: VC SUMMER		Date of Examination: 08/19/2013		Operating Test No.: NRC ILO 11-01												
Competencies	APPLICANTS															
	Bemis, Andrew				Garrett, Craig				Holcombe, Terry				Johnson, Steve			
	RO		<input checked="" type="checkbox"/>		RO		<input checked="" type="checkbox"/>		RO		<input checked="" type="checkbox"/>		RO		<input checked="" type="checkbox"/>	
	SRO-I		<input type="checkbox"/>		SRO-I		<input type="checkbox"/>		SRO-I		<input type="checkbox"/>		SRO-I		<input type="checkbox"/>	
	SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>	
SCENARIO				SCENARIO				SCENARIO				SCENARIO				
RO	BOP	3	BOP	BOP	2	3	RO	RO	2	BOP	BOP	BOP	2	3	RO	
1	2		4	1			4	1		3	4	1			4	
Interpret/Diagnose Events and Conditions	3 5	3 4		4 6 7	2 4			3 5	3 5		3 4 5	4 6 7	2 4			3 5
Comply With and Use Procedures (1)	1 3 5 6	1 3 4 6 7 8		1 4 6 7	1 2 3 4 6 7			3 4 5 7 8	1 3 5 6		1 3 4 5 6 7	1 4 6 7	1 2 3 4 6 7			3 4 5 7 8
Operate Control Boards (2)	1 3 5 6	1 2 3 6 7 8		1 4 6 7	1 2 3 4 6			3 4 5 7 8	1 3 5 6		1 3 4 5 6 7	1 4 6 7	1 2 3 4 6			3 4 5 7 8
Communicate and Interact	1 3 5 6	1 2 3 4 5 6 7 8		2 4 6 7 8	1 2 3 4 5 6 7			3 4 5 7 8	1 3 5 6		1 3 4 5 6 7 8	2 4 6 7 8	1 2 3 4 5 6 7			3 4 5 7 8
Demonstrate Supervisory Ability (3)																
Comply With and Use Tech. Specs. (3)																

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Facility: VC SUMMER		Date of Examination: 08/19/2013		Operating Test No.: NRC ILO 11-01														
Competencies	APPLICANTS																	
	Kline, Ross				Newman, Nathan				Snipes, Ron				Zimmerman, Elvis					
	RO <input checked="" type="checkbox"/>		SRO-I <input type="checkbox"/>		SRO-U <input type="checkbox"/>		RO <input checked="" type="checkbox"/>		SRO-I <input type="checkbox"/>		SRO-U <input type="checkbox"/>		RO <input checked="" type="checkbox"/>		SRO-I <input type="checkbox"/>		SRO-U <input type="checkbox"/>	
	SCENARIO				SCENARIO				SCENARIO				SCENARIO					
	BOP 1	RO 2	BOP 3	4	1	BOP 2	RO 3	4	1	RO 2	BOP 3	4	1	BOP 2	RO 3	4		
Interpret/Diagnose Events and Conditions	2 4	2 5	3 4 5			3 4	2 5			2 5	3 4 5			3 4	2 5			
Comply With and Use Procedures (1)	1 2 3 4 6 7	1 2 5 6	1 3 4 5 6 7			1 3 4 6 7 8	1 2 5 6			1 2 5 6	1 3 4 5 6 7			1 3 4 6 7 8	1 2 5 6			
Operate Control Boards (2)	1 2 3 4 6	1 2 5 6	1 3 4 5 6 7			1 2 3 6 7 8	1 2 5 6			1 2 5 6	1 3 4 5 6 7			1 2 3 6 7 8	1 2 5 6			
Communicate and Interact	1 2 3 4 5 6 7	1 2 5 6	1 3 4 5 6 7			1 2 3 4 5 6 7 8	1 2 5 6			1 2 5 6	1 3 4 5 6 7			1 2 3 4 5 6 7 8	1 2 5 6			
Demonstrate Supervisory Ability (3)																		
Comply With and Use Tech. Specs. (3)																		
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																		

Instructions:

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

Facility: VC SUMMER Date of Examination: 08/19/2013 Operating Test No.: NRC ILO 11-01																
Competencies	APPLICANTS															
	Blue, Brandon				King, Robbie				Rachals, Bert							
	RO				RO				RO				RO			
	SRO-I		<input checked="" type="checkbox"/>		SRO-I		<input checked="" type="checkbox"/>		SRO-I		<input checked="" type="checkbox"/>		SRO-I		<input type="checkbox"/>	
	SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>	
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	SRO	RO	3	4	SRO	RO	3	4	RO	SRO	3	4	1	2	3	4
	1	2			1	2			1	2						
Interpret/Diagnose Events and Conditions	2 3 4 5	2 5			2 3 4 5		2 5		3 5	2 3 5						
Comply With and Use Procedures (1)	1 2 3 5 6 7	1 2 5 6			1 2 3 5 6 7		1 2 5 6		1 3 5 6	1 2 3 4 5 6 7 8						
Operate Control Boards (2)		1 2 5 6					1 2 5 6		1 3 5 6							
Communicate and Interact	1 2 3 4 5 6 7	1 2 5 6			1 2 3 4 5 6 7		1 2 5 6		1 3 5 6	1 2 3 4 5 6 7 8						
Demonstrate Supervisory Ability (3)	1 2 3 5 6 7				1 2 3 5 6 7					1 2 3 4 5 6						
Comply With and Use Tech. Specs. (3)	2 3 5				2 3 5					2 4						

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Facility: VC SUMMER Date of Examination: 08/19/2013 Operating Test No.: NRC ILO 11-01																			
Competencies	APPLICANTS																		
	Fisher, Dan				Geib, James				Rhymer, Danny				Seabrook, Kem						
	RO		SRO-I		SRO-U		RO		SRO-I		SRO-U		RO		SRO-I		SRO-U		
	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		
	SCENARIO				SCENARIO				SCENARIO				SCENARIO						
	1	SRO 2	3	SRO 4		1	2	SRO 3	SRO 4		1	2	SRO 3	SRO 4		1	SRO 2	SRO 3	4
Interpret/Diagnose Events and Conditions		23		23 45 67 8				23 45 67 8		23		23		45			23	23 45	
Comply With and Use Procedures (1)		12 34 56 78		12 34 56 78				12 34 56 7	12 34 56 78	12		12 34 56 7					12 34 56 78	12 34 56 7	
Operate Control Boards (2)																			
Communicate and Interact		12 34 56 78		12 34 56 78				12 34 56 7	12 34 56 78	12		12 34 56 7					12 34 56 78	12 34 56 7	
Demonstrate Supervisory Ability (3)		12 34 56		12 34 56 78				12 34 56 7	12 34 56 78	12		12 34 56 7					12 34 56 7	12 34 56 7	
Comply With and Use Tech. Specs. (3)		24		23				35	23	23 5		35					24	35	

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Facility: VC SUMMER		Date of Examination: 08/19/2013		Operating Test No.: NRC ILO 11-01												
Competencies	APPLICANTS															
	Bemis, Andrew				Garrett, Craig				Holcombe, Terry				Johnson, Steve			
	RO		<input checked="" type="checkbox"/>		RO		<input checked="" type="checkbox"/>		RO		<input checked="" type="checkbox"/>		RO		<input checked="" type="checkbox"/>	
	SRO-I		<input type="checkbox"/>		SRO-I		<input type="checkbox"/>		SRO-I		<input type="checkbox"/>		SRO-I		<input type="checkbox"/>	
	SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>		SRO-U		<input type="checkbox"/>	
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	RO 1	BOP 2	3	BOP 4	BOP 1	2	3	RO 4	RO 1	2	BOP 3	BOP 4	BOP 1	2	3	RO 4
Interpret/Diagnose Events and Conditions	3 5	3 4		4 6 7	2 4			3 5	3 5		3 4 5	4 6 7	2 4			3 5
Comply With and Use Procedures (1)	1 3 5 6	1 3 4 6 7 8		1 4 6 7	1 2 3 4 6 7			3 4 5 7 8	1 3 5 6		1 3 4 5 6 7	1 4 6 7	1 2 3 4 6 7			3 4 5 7 8
Operate Control Boards (2)	1 3 5 6	1 2 3 6 7 8		1 4 6 7	1 2 3 4 6			3 4 5 7 8	1 3 5 6		1 3 4 5 6 7	1 4 6 7	1 2 3 4 6			3 4 5 7 8
Communicate and Interact	1 3 5 6	1 2 3 4 5 6 7 8		2 4 6 7 8	1 2 3 4 5 6 7			3 4 5 7 8	1 3 5 6		1 3 4 5 6 7 8	2 4 6 7 8	1 2 3 4 5 6 7			3 4 5 7 8
Demonstrate Supervisory Ability (3)																
Comply With and Use Tech. Specs. (3)																
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																

Instructions:

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

Facility: VC SUMMER		Date of Examination: 08/19/2013		Operating Test No.: NRC ILO 11-01														
Competencies	APPLICANTS																	
	Kline, Ross				Newman, Nathan				Snipes, Ron				Zimmerman, Elvis					
	RO <input checked="" type="checkbox"/>		SRO-I <input type="checkbox"/>		SRO-U <input type="checkbox"/>		RO <input checked="" type="checkbox"/>		SRO-I <input type="checkbox"/>		SRO-U <input type="checkbox"/>		RO <input checked="" type="checkbox"/>		SRO-I <input type="checkbox"/>		SRO-U <input type="checkbox"/>	
	SCENARIO				SCENARIO				SCENARIO				SCENARIO					
	BOP 1	RO 2	BOP 3	4	1	BOP 2	RO 3	4	1	RO 2	BOP 3	4	1	BOP 2	RO 3	4		
Interpret/Diagnose Events and Conditions	2 4	2 5	3 4 5			3 4	2 5			2 5	3 4 5			3 4	2 5			
Comply With and Use Procedures (1)	1 2 3 4 6 7	1 2 5 6	1 3 4 5 6 7			1 3 4 6 7 8	1 2 5 6			1 2 5 6	1 3 4 5 6 7			1 3 4 6 7 8	1 2 5 6			
Operate Control Boards (2)	1 2 3 4 6	1 2 5 6	1 3 4 5 6 7			1 2 3 6 7 8	1 2 5 6			1 2 5 6	1 3 4 5 6 7			1 2 3 6 7 8	1 2 5 6			
Communicate and Interact	1 2 3 4 5 6 7	1 2 5 6	1 3 4 5 6 7			1 2 3 4 5 6 7 8	1 2 5 6			1 2 5 6	1 3 4 5 6 7			1 2 3 4 5 6 7 8	1 2 5 6			
Demonstrate Supervisory Ability (3)																		
Comply With and Use Tech. Specs. (3)																		
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																		

Instructions:

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

Facility: VC SUMMER		Date of Examination: 08/19/2013				Operating Test No.: NRC ILO 11-01											
Competencies	APPLICANTS																
	Blue, Brandon				King, Robble				Rachals, Bert								
	RO <input type="checkbox"/>				RO <input type="checkbox"/>				RO <input type="checkbox"/>				RO <input type="checkbox"/>				
	SRO-I <input checked="" type="checkbox"/>				SRO-I <input checked="" type="checkbox"/>				SRO-I <input checked="" type="checkbox"/>				SRO-I <input type="checkbox"/>				
	SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				
SCENARIO				SCENARIO				SCENARIO				SCENARIO					
SRO	RO			SRO	RO			SRO	RO			SRO	RO				
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		
2 3 4 5	2 5			2 3 4 5		2 5		3 5	2 3 5								
1 2 3 5 6 7	1 2 5 6			1 2 3 5 6 7		1 2 5 6		1 3 5 6	1 2 3 4 5 6 7 8								
	1 2 5 6					1 2 5 6		1 3 5 6									
1 2 3 4 5 6 7	1 2 5 6			1 2 3 4 5 6 7		1 2 5 6		1 3 5 6	1 2 3 4 5 6 7 8								
1 2 3 5 6 7				1 2 3 5 6 7					1 2 3 4 5 6								
2 3 5				2 3 5					2 4								

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Facility: VC SUMMER Date of Examination: 08/19/2013 Operating Test No.: NRC ILO 11-01																		
Competencies	APPLICANTS																	
	Fisher, Dan				Geib, James				Rhymer, Danny				Seabrook, Kern					
	RO		SRO-I		SRO-U		RO		SRO-I		SRO-U		RO		SRO-I		SRO-U	
	<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>		<input checked="" type="checkbox"/>	
	SCENARIO				SCENARIO				SCENARIO				SCENARIO					
1	SRO 2	3	SRO 4	1	2	SRO 3	SRO 4	SRO 1	2	SRO 3	4	1	SRO 2	SRO 3	4			
Interpret/Diagnose Events and Conditions		2 3 5		2 3 4 5 6 7 8			2 3 4 5 6 7 8	2 3 4 5		2 3 4 5			2 3 5	2 3 4 5				
Comply With and Use Procedures (1)		1 2 3 4 5 6 7 8		1 2 3 4 5 6 7 8			1 2 3 4 5 6 7 8	1 2 3 5 6 7		1 2 3 4 5 6 7			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7				
Operate Control Boards (2)																		
Communicate and Interact		1 2 3 4 5 6 7 8		1 2 3 4 5 6 7 8			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7		1 2 3 4 5 6 7			1 2 3 4 5 6 7 8	1 2 3 4 5 6 7				
Demonstrate Supervisory Ability (3)		1 2 3 4 5 6		1 2 3 4 5 6 7 8			1 2 3 4 5 6 7 8	1 2 3 5 6 7		1 2 3 4 5 6 7			1 2 3 4 5 6 7	1 2 3 4 5 6 7				
Comply With and Use Tech. Specs. (3)		2 4		2 3			3 5 2 3	2 3 5		3 5			2 4 3 5					

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Facility: V.C. SUMMER		Date of Exam: AUGUST 2013																
Tier	Group	RO K/A Category Points												SRO-Only Points				
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total		
1. Emergency & Abnormal Plant Evolutions	1	3	3	3				3	3				3	18	3	3	6	
	2	2	1	2				1	2				1	9	2	2	4	
	Tier Totals	5	4	5				4	5				4	27	5	5	10	
2. Plant Systems	1	3	3	3	3	2	3	3	2	2	2	2	28	3	2	5		
	2	1	1	1	1	1	1	1	1	1	0	1	10	0	2	3		
	Tier Totals	4	4	4	4	3	4	4	3	3	2	3	38	5	3	8		
3. Generic Knowledge and Abilities Categories				1		2		3		4		10		1	2	3	4	7
				3		2		2		3				2	2	1	2	
<p>Note:</p> <ol style="list-style-type: none"> Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, the "Tier Totals" in each K/A category shall not be less than two). The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by ± 1 from that specified in the table based on NRC revisions. The final RO exam must total 75 points and the SRO-only exam must total 25 points. Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems/evolutions that are not included on the outline should be added. Refer to Section D.1.b of ES-401 for guidance regarding the elimination of inappropriate K/A statements. Select topics from as many systems and evolutions as possible; sample every system or evolution in the group before selecting a second topic for any system or evolution. Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories. * The generic (G) K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system. Refer to Section D.1.b of ES-401 for the applicable K/As. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IRs) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note #1 does not apply). Use duplicate pages for RO and SRO-only exams. For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43. 																		

KA	NAME / SAFETY FUNCTION:	TOPIC:															
		IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G				
		RO	SRO														
007EK1.02	Reactor Trip - Stabilization - Recovery / 1	3.4	3.8	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shutdown margin
008AK2.03	Pressurizer Vapor Space Accident / 3	2.5	2.4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Controllers and positioners
009EK1.02	Small Break LOCA / 3	3.5	4.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Use of steam tables
011EG2.2.44	Large Break LOCA / 3	4.2	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions
015AG2.1.28	RCP Malfunctions / 4	4.1	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the purpose and function of major system components and controls.
022AK3.07	Loss of Rx Coolant Makeup / 2	3	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Isolating charging
025AK2.05	Loss of RHR System / 4	2.6	2.6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor building sump
026AA1.06	Loss of Component Cooling Water / 8	2.9	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Control of flow rates to components cooled by the CCWS
029EA1.04	ATWS / 1	3.9	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BIT inlet valve switches
040AA2.02	Steam Line Rupture - Excessive Heat Transfer / 4	4.6	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conditions requiring a reactor trip
054AK1.01	Loss of Main Feedwater / 4	4.1	4.3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MFV line break depressurizes the S/G (similar to a steam line break)

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
056AG2.4.1	Loss of Off-site Power / 6	4.6	4.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of EOP entry conditions and immediate action steps.
062AA2.01	Loss of Nuclear Svc Water / 4	2.9	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Location of a leak in the SWS
065AK3.08	Loss of Instrument Air / 8	3.7	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions contained in EOP for loss of instrument air
077AA1.03	Generator Voltage and Electric Grid Disturbances / 6	3.8	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Voltage regulator controls
WE04EA2.2	LOCA Outside Containment / 3	3.6	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.
WE05EK2.2	Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	3.9	4.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems and relations between the proper operation of these systems to the operation of the facility.
WE11EK3.4	Loss of Emergency Coolant Recirc. / 4	3.6	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facilities license and amendments are not violated.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
RO SRO														
036AA1.04	Fuel Handling Accident / 8	3.1	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fuel handling equipment during an incident
037AA2.08	Steam Generator Tube Leak / 3	2.8	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Failure of Condensate air ejector exhaust monitor
059AK1.05	Accidental Liquid RadWaste Rel. / 9	2.6	3.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The calculation of offsite doses due to a release from the power plant
069AK2.03	Loss of CTMT Integrity / 5	2.8	2.9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personnel access hatch and emergency access hatch
074EG2.1.19	Inad. Core Cooling / 4	3.9	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to use plant computer to evaluate system or component status.
WE01EA2.1	Radiagnosis / 3	3.2	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.
WE03EK3.4	LOCA Cooledown - Depress. / 4	3.5	3.9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facilities license and amendments are not violated.
WE07EK1.2	Saturated Core Cooling Core Cooling / 4	3.1	3.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal, abnormal and emergency operating procedures associated with (Pressurized Thermal Shock).
WE16EK3.4	High Containment Radiation / 9	3.0	3.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facilities license and amendments are not violated.

KA	NAME / SAFETY FUNCTION:	TOPIC:												
		IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	
003K2.02	Reactor Coolant Pump	RO	SRO	2.5	2.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CCW pumps
004K5.02	Chemical and Volume Control	3.5	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Explosion hazard associated with hydrogen containing systems
005K5.05	Residual Heat Removal	2.7	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plant response during "solid plant": pressure change due to the relative incompressibility of water
006A3.08	Emergency Core Cooling	4.2	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automatic transfer of ECCS flowpaths
006K2.02	Emergency Core Cooling	2.5	2.9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Valve operators for accumulators
007K4.01	Pressurizer Relief/Quench Tank	2.6	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Quench tank cooling
008G2.4.34	Component Cooling Water	4.2	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects
008K3.03	Component Cooling Water	4.1	4.2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RCP
010K2.01	Pressurizer Pressure Control	3.0	3.4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	PZR heaters
012A1.01	Reactor Protection	2.9	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Trip setpoint adjustment
012K6.10	Reactor Protection	3.3	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Permissive circuits

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
013A3.02	Engineered Safety Features Actuation	4.1	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Operation of actuated equipment
013K6.01	Engineered Safety Features Actuation	2.7	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sensors and detectors
022A1.03	Containment Cooling	3.1	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment humidity
026A4.01	Containment Spray	4.5	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CSS controls
039A1.10	Main and Reheat Steam	2.9	3.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Air ejector PRM
039A2.01	Main and Reheat Steam	3.1	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flow paths of steam during a LOCA
059G2.4.31	Main Feedwater	4.2	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of annunciators alarms, indications or response procedures
061K6.02	Auxiliary/Emergency Feedwater	2.6	2.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pumps
062K1.02	AC Electrical Distribution	4.1	4.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ED/G
062K4.06	AC Electrical Distribution	2.9	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	One-line diagram of 6.9kV distribution, including sources of normal and alternative power
063K1.03	DC Electrical Distribution	2.9	3.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Battery charger and battery

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
064A4.03	Emergency Diesel Generator	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Synchroscope
073A2.01	Process Radiation Monitoring	2.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Erratic or failed power supply
076K3.07	Service Water	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ESF loads
078K4.02	Instrument Air	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cross-over to other air systems
103K1.02	Containment	3.9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment isolation/containment integrity
103K3.01	Containment	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of containment integrity under shutdown conditions

KA	NAME / SAFETY FUNCTION:	TOPIC:															
		IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G				
		RO	SRO														
002A2.02	Reactor Coolant	4.2	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of coolant pressure	
014G2.4.20	Rod Position Indication	3.8	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of operational implications of EOP warnings, cautions and notes.	
016K1.12	Non-nuclear Instrumentation	3.5	3.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	S/G	
027K2.01	Containment Iodine Removal	3.1	3.4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fans	
033K3.02	Spent Fuel Pool Cooling	2.8	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Area and ventilation radiation monitoring systems	
034K6.02	Fuel Handling Equipment	2.6	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation monitoring systems	
035K5.03	Steam Generator	2.8	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Shrink and swell concept	
071A3.01	Waste Gas Disposal	2.6	2.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HRPS	
079K4.01	Station Air	2.9	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cross-connect with IAS	
086A1.02	Fire Protection	3.0	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fire water storage tank level	

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
RO SRO														
G2.1.15	Conduct of operations	2.7	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of administrative requirements for temporary management directives such as standing orders, night orders, Operations memos, etc.
G2.1.17	Conduct of operations	3.9	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to make accurate, clear and concise verbal reports.
G2.1.7	Conduct of operations	4.4	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation.
G2.2.39	Equipment Control	3.9	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of less than one hour technical specification action statements for systems.
G2.2.40	Equipment Control	3.4	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to apply technical specifications for a system.
G2.3.11	Radiation Control	3.8	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to control radiation releases.
G2.3.12	Radiation Control	3.2	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiological safety principles pertaining to licensed operator duties
G2.4.32	Emergency Procedures/Plans	3.6	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of operator response to loss of all annunciators.
G2.4.37	Emergency Procedures/Plans	3.0	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the lines of authority during implementation of an emergency plan.
G2.4.9	Emergency Procedures/Plans	3.8	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of low power / shutdown implications in accident (e.g. LOCA or loss of RHR) mitigation strategies.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
007EA2.02	Reactor Trip - Stabilization - Recovery / 1	4.3	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Proper actions to be taken if the automatic safety functions have not taken place
011EA2.10	Large Break LOCA / 3	4.5	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Verification of adequate core cooling
025AA2.05	Loss of RHR System / 4	3.1	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Limitations on LPI flow and temperature rates of change
026AG2.2.44	Loss of Component Cooling Water / 8	4.2	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions
055EG2.4.21	Station Blackout / 6	4.0	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the parameters and logic used to assess the status of safety functions
062AG2.4.30	Loss of Nuclear Svc Water / 4	2.7	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of events related to system operations/status that must be reported to internal organizations or outside agencies.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
003AA2.02	Dropped Control Rod / 1	2.7	2.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Signal inputs to rod control system
028AA2.14	Pressurizer Level Malfunction / 2	2.6	2.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The effect on indicated PZR levels, given a change in ambient pressure and temperature of reflux boiling
036AG2.4.41	Fuel Handling Accident / 8	2.9	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the emergency action level thresholds and classifications.
068AG2.4.8	Control Room Evac. / 8	3.8	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of how abnormal operating procedures are used in conjunction with EOPs.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
003G2.2.25	Reactor Coolant Pump	3.2	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.
007A2.02	Pressurizer Relief/Quench Tank	2.6	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Abnormal pressure in the PRT
022G2.4.50	Containment Cooling	4.2	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.
064A2.03	Emergency Diesel Generator	3.1	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Parallel operation of ED/Gs
073A2.02	Process Radiation Monitoring	2.7	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Detector failure

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
011A2.12	Pressurizer Level Control	3.3	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Operation of auxiliary spray
072G2.4.18	Area Radiation Monitoring	3.3	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the specific bases for EOPs.
086A2.04	Fire Protection	3.3	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Failure to actuate the FPS when required, resulting in fire damage

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
G2.1.32	Conduct of operations	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to explain and apply all system limits and precautions.
G2.1.5	Conduct of operations	2.9	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to locate and use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc.
G2.2.17	Equipment Control	2.6	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the process for managing maintenance activities during power operations.
G2.2.21	Equipment Control	2.9	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of pre- and post-maintenance operability requirements.
G2.3.6	Radiation Control	2.0	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to approve release permits
G2.4.28	Emergency Procedures/Plans	3.2	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of procedures relating to emergency response to sabotage.
G2.4.40	Emergency Procedures/Plans	2.7	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the SRO's responsibilities in emergency plan implementation.

Tier / Group	Randomly Selected K/A	Reason for Rejection
RO's		
2/2	014 G2.4.20	VC Summer Emergency Operating Procedures do not have notes or cautions specific to the Rod Position Indication System that serves as the basis for a discriminating question. Replaced with G2.4.4 for RO exam per communication with the Chief Examiner.
2/1	022 A1.03	VC Summer operators do not operate Containment Cooling Systems components for the purpose of controlling humidity. Replaced with A1.01 for the RO exam per communication with the Chief Examiner.
2/2	071 A3.02	VC Summer does not have a pressure-regulating system for waste gas vent header. Replaced with A3.01 for the RO exam per communication with the Chief Examiner.
2/2	086 A1.02	VC Summer does not have a fire water storage tank. Replaced with A1.01 for the RO exam per communication with the Chief Examiner.
3	G2.1.15	VC Summer standing orders, night orders and Operations memos do not serve as the basis for a discriminating question at the RO level. Replaced with G2.1.13 for the RO exam per communication with the Chief Examiner.
SRO's		
2/2	011 2.12	Not able to write a discriminating question since operation of auxiliary spray does not directly relate to the Pressurizer level control system. KA replaced with 2.06 for SRO test per communication with the Chief Examiner.

Facility: V.C. Summer Station		Date of Exam: 8/19/13		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.			9	0	0													
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.			9	0	0													
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401			9	0	0													
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).					0													
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 <input checked="" type="checkbox"/> the examinations were developed independently; or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or ___ other (explain)			9	0	0													
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.			<table border="1"> <tr> <th colspan="2">Bank</th> <th colspan="2">Modified</th> <th colspan="2">New</th> </tr> <tr> <td>RO 18/75 24%</td> <td>SRO 1/25 4%</td> <td>RO 27/75 36%</td> <td>SRO 5/25 20%</td> <td>RO 30/75 40%</td> <td>SRO 19/25 76%</td> </tr> </table>	Bank		Modified		New		RO 18/75 24%	SRO 1/25 4%	RO 27/75 36%	SRO 5/25 20%	RO 30/75 40%	SRO 19/25 76%	9	0	0
Bank		Modified		New														
RO 18/75 24%	SRO 1/25 4%	RO 27/75 36%	SRO 5/25 20%	RO 30/75 40%	SRO 19/25 76%													
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.			<table border="1"> <tr> <th colspan="2">Memory</th> <th colspan="2">C/A</th> </tr> <tr> <td>RO 33/75 44.0%</td> <td>SRO 10/25 40%</td> <td>RO 42/75 56.0%</td> <td>SRO 15/25 60.0%</td> </tr> </table>	Memory		C/A		RO 33/75 44.0%	SRO 10/25 40%	RO 42/75 56.0%	SRO 15/25 60.0%	9	0	0				
Memory		C/A																
RO 33/75 44.0%	SRO 10/25 40%	RO 42/75 56.0%	SRO 15/25 60.0%															
8. References/handouts provided do not give away answers or aid in the elimination of distractors.			9	0	0													
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.			9	0	0													
10. Question psychometric quality and format meet the guidelines in ES Appendix B.			9	0	0													
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.			9	0	0													
a. Author b. Facility Reviewer (*) c. NRC Chief Examiner (#) d. NRC Regional Supervisor			Printed Name / Signature Robert Johnston Nikos Okimoto KENNETH SCHAAF MARK FRANKF		Date 8/15/13 8/15/13 8/15/13 8/15/13													
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.																		

Instructions

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

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
3. Check the appropriate box if a psychometric flaw is identified:
 - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
 - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
 - The answer choices are a collection of unrelated true/false statements.
 - The distractors are not credible; single implausible distractors should be repaired, **more than one is unacceptable**.
 - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
 - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
 - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
 - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
 - The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (**K/A and license level mismatches are unacceptable**).
6. **Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of ES-401 Section D.2.f.**
7. Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
8. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
1	H	2				X								M	E S	<p>002 A2.02 Cred Dist: Stating that accumulators are injecting at 950 psig not plausible. Lowered RCS pressure to 750 and ruptured SG pressure to 650 psig to increase plausibility. Stem Focus: Are the loss of "Loss offsite power" or "RCS Cooldown complete" bullets necessary?</p> <p>Loss of offsite power is required to convey that RCPs are not running to set up voiding. Cooldown complete is included to convey that an expected depressurization of EOP-4.0 is in progress.</p> <p>Changed question to replace CFT injecting.</p> <p>Question SAT 7/26. KDS</p>
2	H	3												N	S	003 K2.02
3	F	1				X								N	U S	<p>004 K5.02 Cred Dist: B just not plausible. None of the distractors really look plausible when compared to A. Recommend asking a percentage and an action. Changed to 2X2 question why degas and what the steady state limit is for oxygen.</p> <p>CVCS 201 rejected because of plausibility of distracters. K Schaaf agreed to allow a question on the Hydrogen spec in the Waste Gas system. Waste Gas 66 drafted</p> <p>Changed question to ask about H2, Ox limitations in the waste decay tanks.</p> <p>Question SAT 7/26. KDS</p>
4	H	3				X								M	E S	<p>005 K5.05 Stem Focus/Cred Dist: Do they need to have the "The PZR is solid" bullet? It makes the three distractors too easy to eliminate (i.e. not plausible). Since this KA is very specific, it would go to put them in a place where they "should" know that they are solid without telling them.</p> <p>Changed RCS temperature to more firmly place in a solid plant OPS condition. Removed statement of solid plant condition.</p> <p>Changes ok.</p> <p>Question SAT 7/26. KDS</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			
5	H	3	X											M	E S	<p>006 A3.08 Stem Focus: For the 4th bullet, can I say that the attachment is complete? Is there a time delay associated with the swap? Eliminated wording about pumps and valves and just indicated Attachment 3 complete.</p> <p>There is no time delay associated with the suction valve swaps other than the stroke time for the valves.</p> <p>Ok with changes.</p> <p>Question SAT 7/26. KDS</p>
6	H	3	X											N	E S	<p>006 K2.02 Stem Focus: I would recommend changing the second part to :Power to MVG-8808C _____ is/is not available. All 4 answers stated that power is available to MVG-8808A. Changed per comment.</p> <p>Ok with changes.</p> <p>Question SAT 7/26. KDS</p>
7	H	3				X								M	E S	<p>007 EK1.02 Cred Dist: SDM decreasing one minute after a trip not plausible. Could the boron be injecting within one minute after a trip? Changed first half of question to test which isotope is decaying.</p> <p>Ok with changes</p> <p>Question SAT 7/26. KDS</p>
8	F	2												M	S	007 K4.01
9	F	2												M	S	008 AK2.03
10	H	3				X								M	U S	<p>008 G2.4.11 Cred Dist: Exceeding an operating limit but waiting to trip the component while reducing power is not plausible. 2nd part of A&B not plausible. Recommend making reactor power 35 % and for the 2nd part asking "The reactor _____ is/is not required to be tripped. Changed per comment.</p> <p>Ok with changes</p> <p>Question SAT 7/26. KDS</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			
11	H	2				X								M	E S	<p>008 K3.01 Cred Dist: 2nd part of A, doesn't make sense to stop a charging pump to protect seals. 2nd part of C doesn't make sense to stop flow to prevent steam binding.</p> <p>Changed A to say Charging pump motor bearing rather than RCP seals. Changed the answer in B from Chargin pump gearbox to Charging pump thrust bearing to be more correct. Changed C to say RHR pump bearing.</p> <p>Ok with changes</p> <p>Question SAT 7/26. KDS</p>
12	H	2	X											M	E S	<p>009 EK1.02 Stem Focus: The stem has you stop the A CCP and the correct answer has you start the same pump. This seems confusing unless you split up the conditions with some time spacing such that the pump was secured but conditions have now changed.</p> <p>Established a time line per comment.</p> <p>Plaus Statement for C states I would start the CCP if < 67.5 degrees and the others state it as 52.5 degrees.</p> <p>Stated in that manner to discuss difference in requirements for restarting pump depending on whether adverse containment conditions are in effect.</p> <p>Ok with changes</p> <p>Question SAT 7/26. KDS</p>
13	H	2	X											B	E S	<p>010 K2.01 Stem Focus: Remove the last bullet.</p> <p>Removed last bullet per comment.</p> <p>Ok with changes</p> <p>Question SAT 7/26. KDS</p>
14	H	3				X								N	U S	<p>011 EG2.2.44 Cred Dist: A&B Steam Generators as a heat sink is not plausible.</p> <p>Replaced question.</p> <p>7/26 – KS did not think injection at 550 psig was plausible. Replaced with new question.</p> <p>Changed during review in office.</p> <p>Question SAT 7/26. KDS</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			
15	H	2				X								M	U S	<p>012 A1.01 Cred Dist: 2nd part of B&C, having axial flux becoming excessively negative on a rod pull is not plausible. Where are the CRs at 75% power. Revised question to remove direction of rod motion and to lower power to have rods at a lower position. 7/26 – negative delta-flux still not plausible, replaced question with RCS temp 38. Insert channel and wording about pressurizer heaters Changed during review in office. Question SAT 7/26. KDS</p>
16	F	2				X								M	E S	<p>012 K6.10 Cred Dist: P9 & P12 not plausible for a loop flow malfunction. Recommend keeping P7 & P8 and making a two part question. Changed per comment. Question SAT 7/26. KDS</p>
17	H	2				X								M	E S	<p>013 A3.02 Cred Dist: Do the additional valves in C&D ever operate automatically? If not, they are not plausible. Remove 3rd bullet. Removed third bullet and eliminated valves that do not automatically reposition per comment. Changed during review in office. Question SAT 7/26. KDS</p>
18	F	3												B	S	013 K6.01

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			
19	H	3					X							M	S	<p>Need to ensure that A and D are incorrect.</p> <p>What is highlighted in the reference pack for the correct answer entry condition is "(2)Any Control Rod failing to move from bottom of the core with its associated bank". The deviation doesn't occur until step 180 so I think this could be argued. Also (3) Any Control Rod is inoperable OR misaligned from the Group Step Counder demand position by 12 steps or more. They are only 8 steps out in the stem. Lets walk through these. At this point, I'm not sure if there are no correct answers or several correct answers.</p> <p>Per operations, AOP-403.5 would likely be used for a significant difference that is less than 12 steps.</p> <p>Reference pack highlighted incorrectly, should be "3. Any Control Rod is inoperable OR misaligned from the Group Step Counter demand position by 12 steps or more." Adjusted value for misaligned rod to 174 steps.</p> <p>Changed during review in office.</p> <p>Question SAT 7/26. KDS</p>
20	F	2	X											M	E S	<p>015 G2.1.28</p> <p>Stem Focus: Change power to 9%. Change the second question to ask if the reactor should have automatically tripped.</p> <p>Cloned question and revised per comment.</p> <p>Ok with changes.</p> <p>Question SAT 7/26. KDS</p>
21	H	2				X								B	E S	<p>016 K1.12</p> <p>Cred Dist: B, steam flow failing low causing an increase in level not plausible.</p> <p>Are there any parameters that would cause this condition even if they are not in Ch III?</p> <p>If at 70% power, the controls would normally be in Automatic, remove the second bullet.</p> <p>Removed 2nd bullet and changed B distracter.</p> <p>Changed "B" to SG A NR level Ch I failed low.</p> <p>Question SAT 7/26. KDS</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			
22	H	2	X											N	E S	022 A1.01 Stem Focus: Change 412' temperature to 116 °F. This will change the answer and test whether or not the applicant knows if entry is based on average or highest reading. Changed per comment. Question SAT 7/26. KDS
23	H	2				X								N	U S	022 AK3.07 Cred Dist: A down stream failing closed giving the indicated oscillations not plausible. Created new question to test the valves that would cause a loss of suction. Ok with changes. Question SAT 7/26. KDS
24	F	2				X								M	U S	025 AK2.05 Cred Dist: B,C,D not plausible. Based on reference provided, it discusses air entrainment, not cavitation. Not sure if A is actually correct. Replaced question with EOPS 844. Question SAT 7/26. KDS
25	F	3												M	S	026 A4.01
26	F	3												N	S	026 AA1.06 Can I reset a Phase A signal before I reset a Phase B signal? Yes Question SAT 7/26. KDS
27	F	2												N	S	029 EA1.01
28	F	2												N	S	033 K3.02
29	F	2												M	S	034 K6.02
30	F	2	X											M	E S	035 K5.03 Stem Focus: Need to ask the question such that "Potentially" can be removed from the question. Its too easy to argue. Removed (1) from stem and the word potentially per comment. Question SAT 7/26. KDS

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			
31	F	2				X								B	E S	036 AA1.04 Ensure Ops Mgmt ok with asking questions about sequence of steps in procedures. Cred Dist: Change C to <u>one</u> train to make it more plausible. Changed per comment. Question SAT 7/26. KDS
32	H	3				X								N	E S	037 AA2.08 Cred Dist: 2 nd part of C&D not plausible. What does the RM read out in? Question good as is. Question SAT 7/26. KDS
33	H	3												N	S	039 A1.06
34	H	3				X								B	E S	039 A2.01 Cred Dist: A not plausible to be the first action. D not plausible to do what looks like opening them with temperature going down. Changed D to say adjustment of controllers to higher value (to close the valves). Replaced A with closure of turbine drain valves. Ensure Ops Mgmt ok with asking questions about sequence of steps in procedures. Question SAT 7/26. KDS
35	H	3	X											N	E S	040 AA2.02 Stem Focus: Move "Trip the Reactor" to the question stem. Simplify the question to ask something similar to: Reactor trip due to _____. SI is required due to _____. Changed to time that reactor tripped and SI's. Re-wrote in office. Question SAT 7/26. KDS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
36	H	3	X			X								N	E S	<p>054 AK1.01</p> <p>Stem Focus: Is "A" SG flow going to be stable with no feedwater coming in? Why is Tave increasing?</p> <p>Indications of feed rupture.</p> <p>Cred Dist: SI termination not plausible with the given indications.</p> <p>Changed to EOP-3.0.</p> <p>Consider changing 2nd part to: Based on the above conditions, EOP 1.0 will direct the operator to GO TO _____. Changed per comment.</p> <p>Modified stem in office.</p> <p>Question SAT 7/26. KDS</p>
37	H	3	X											B	E S	<p>056 G2.4.1</p> <p>Stem Focus. Move 2nd bullet under current conditions to initial conditions. Change 1st bullet under Current conditions to EOP-1.1, REACTOR TRIP RECOVERY has been initiated.</p> <p>Bullet containing EDG event cannot be moved since EOP-1.1 would not be initiated in that time sequence.</p> <p>It could be appealed that "Verify" is not an action. Reword the question to have just actions that the operator performs.</p> <p>Reworded to be consistent with wording that discusses high level action steps in OAP-103.4 EOP/AOP Users Guide.</p> <p>Ensure Ops Mgmt ok with asking questions about sequence of steps in procedures.</p> <p>Modified stem during review.</p> <p>Question SAT 7/26. KDS</p>
38	F	2				X								M	E S	<p>059 AK1.02</p> <p>Cred Dist: Replace > 25 with 15 (the annual limit for Lense).</p> <p>Changed per comment</p> <p>Question SAT 7/26. KDS</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			
39	F	2	X												E S	059 G2.4.31 Stem Focus: replaced “prescribed” with “directed” Changed per comment. Question SAT 7/26. KDS
40	H	2												M	S	061 K6.02
41	H	2		X		X								M	E S	062 AA2.01 Cred Dist: A is not plausible. Cue: the correct answer is the only answer that has 2B in it. The question is asking for a loop B component. Is there a component that we can use that doesn't have the same number arrangement as the question stem? Changed to “1B” versus “2B” to draw a similarity to charging pump valve scheme (ex) that has all of one number on one train. Question SAT 7/26. KDS
42	H	2												B	S	062 K1.02
43	F	2												N	S	062 K4.06
44	F	2				X	X							B	E S	063 K1.03 Cred Dist: The batteries are hooked directly to the bus (I'm not sure why the plausibility statement has them going through an inverter). Since the batteries are normally floated by the charger, it really hard to see them as plausible. Part: At the same time, I think I could argue that if the battery charger voltage fluctuates, there are times when in a normal lineup, that the battery could be supplying the bus. It would be easier to give some voltages and ask what is supplying or ask if the charger goes down, which battery is supplying. Changed question to test knowledge of source based on bus voltage as per comment. Question SAT 7/26. KDS

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			
45	H	3				X								B	E S	064 A4.03 Cred Dist: 1 st part of C&D: pushing the EMERG START when the DG is already running is not plausible. Changed EMERG START to position of the EDG SYNC SEL switch. Question SAT 7/26. KDS
46	F	2												N	S	065 AK3.08
47	F	3												M	S	069 AK2.03
48	F	2												N	S	071 A3.01
49	H	2	X											N	E S	073 A2.01 Stem Focus: Add "Control Room" Emergency Vent.... To answer A. Changed per comment. Question SAT 7/26. KDS
50	H	3	X			X								N	U S	074 EG2.1.19 Stem Focus: I don't believe 50 psig containment pressure on a SBLOCA (Still have 1300 psig in the RCS) is operationally valid. Cred Dist: A&B are direct lookup. Would be a direct lookup if the candidate is given EOP-12.0, CSFSTs. In this case the candidate has to know where the pertinent parameters are found and apply them to the CSFST logic from memory. It will be ok if there is some additional decision making involved in A&B and containment pressure is lowered. Changed so that has two faulted generators in reference. A LOCA and loss of injection lead to current conditions. Modified in office. Question SAT 7/26. KDS

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			
51	F	2				X									U S	075 K2.03 Cred Dist: A&B SWP breakers staying closed on a loss of power is not plausible unless there are some other big breakers on that bus that will not load shed. Just asking the power supply would be fine. Changed to a question asking B SWP power supply. Question SAT 7/26. KDS
52	F	2												M	S	076 K3.07
53	F	2												N	S	077 AA1.03
54	H	3												N	S	078 K4.02
55	F	2				X								N	U S	079 K4.01 Cred Dist: A&B Given two compressors with two setpoints, why would I pick either to start at 65 psig? This makes A&B not plausible. Replaced question. Question SAT 7/26. KDS
56	F	2				X								M	E S	086 A1.01 The answers for this question mix and match the words start and running. A appears to be ok. B, C & D could be eliminated by not mentioning the Jockey Pump. As pressure decreases to < 85 psig, the Jockey Pump will start. This gives the question no correct answers. Changed A to read “Jockey Pump” will start. Question SAT 7/26. KDS
57	H	3												B	S	103 K1.02
58	F	2												N	S	103 K3.01
59	F	2												N	S	G 2.1.13

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
60	H	3												N	U S	<p>G 2.1.20 Cred Dist: A Waiting 20 minutes in the EOP for a MD pump to return is not plausible. Stem Focus: In the correct answer (C), the answer states to Notify local Operators. Granted that this has to be done to operate the valves locally. The verbage seems misleading in that it's the verbage that is used in the left column at step g (2). The procedure RNO column has the local operator OPEN the EFW MS Block and close the MS Header EFW STM SUPPLY. The correct answer (C) states to close the MS Header EFW STM SUPPLY ONLY. This is not true so there are arguably no correct answers.</p> <p>Reduced expected restoration time to 5 minutes. Also inserted "A" in distracter A for clarity. DISCUSS. 7/26 – Per KS, A distractor not plausible, either replace A distractor or entire question. KA reviewed, there is flexibility in selection of question.</p> <p>Question replaced. Question SAT 8/6. KDS</p>
61	H	2												B	E S	<p>G 2.1.7 Cred Dist: A not plausible because it state that you are diluting on a down power. D is not plausible because the steam dumps opening would not result in the CRB INSRT LMT LO alarm. Replaced A distracter and adjusted D distracter for clarity. 7/26 – per KS, D not plausible, clonsed and revised into a 2x2. Question SAT 8/6. KDS</p>
62	F	2				X								N	E S	<p>G 2.2.39 Cred Dist: B not plausible when your not talking about a safety bus. Changed B an re-odered distracters. Changed wording of stem to say one hour after lockout instead of using 1100 and 1200. Question SAT 7/26. KDS</p>
63	F	2				X								M	E S	<p>G 2.2.40 Cred Dist: Change D to "Boundary leakage is greater than the limit." Changed per comment. Question SAT 7/26. KDS</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			
64	H	3	X											B	S/E S	<p>G 2.3.11 Stem Focus: Is the 4th bullet needed? If not, remove. Do I have to take the selector switch to CLOSE at all when resetting? Is there a procedure step for this function or is this procedure action only contained in a note?</p> <p>NO change. Per 1MS-41-012-0161, with the valve in open, the only action required to physically open the valve is for the controller to be taken to zero. There are no procedural directions to reset from a radiation spike other than in the note so there is no direction to take valve to close during reset. The 4th bullet is required because RM-A10 also interlocks HCV-0014 closed so the candidate has to know that that monitor is not in alarm.</p> <p>Question SAT 7/26. KDS</p>
65	F	2				X								M	U S	<p>G2.3.12 Cred Dist: No plausible to NOT tag the actual component which makes A&B not plausible. When waiving the IV, is the line left blank? Replaced A and B distractors and reordered. 7/26 – per KS, distractor B not plausible.</p> <p>Create 2x2 as a modification to the existing question.</p> <p>Question SAT 8/6. KDS</p>
66	H	2				X								M	E S	<p>G 2.4.32 Stem Focus: Change "a" surveillance to "the correct surveillance". Change " a failed annunciator" to " the failed annunciators". Changed per comment</p> <p>Question SAT 7/26. KDS</p>
67	F	2				X								N	E S	<p>2.4.37 Cred Dist: The reference states that "Operators may be dispatched". Looking at EPP-028 Rev 1, It looks like the correct answer happens for redirects but not dispatches. The TSC contacts the OSC but it doesn't specify who directs to operators. Is this an old revision? There may not be a correct answer. Need to discuss.</p> <p>Changed question from how AOs are dispatched to how AOs are redirected.</p> <p>Question SAT 7/26. KDS</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			
68	H	3				X								B	U S	<p>G 2.4.9 Cred Dist: A&B are not actions. Based on the plant conditions, could I make a reasonable conclusion that I have a loss of all RHR. Rec putting parameters (i.e. Flow fluctuating 400-1200 gpm) Ensure Ops Mgmt ok with asking questions about sequence of steps in procedures. OK.</p> <p>Replaced original A and B distracters, reordered distracters and put RHR flow as per comment.</p> <p>Question SAT 7/26. KDS</p>
69	H	2				X								N	E S	<p>WE01EA2.1 Cred Dist; A Loss of Secondary or Reactor Coolant not plausible with a SGTR and Faulted SG. Walk through procedure to get to EOP 1.5 Replaced distracter with EOP-1.0.</p> <p>7/26 – per KS, EOP-1.0 not plausible. Changed stem to indicate that normal charging is established to add plausibility.</p> <p>Question SAT 8/6. KDS</p>
70	H	2												N	S	WE03 EK3.3

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
71	H	3												M	E S	<p>WE04 EA2.2 Change 2nd part of A&C to “check if RCS pressure is continuing to decrease”.</p> <p>Changed per comment. I question whether or not this is really operationally valid. Unless there is really some reason to pick the “A” loop first, what difference does it make.</p> <p>Does not make a difference which loop only consistent with actual procedure step. Cred Dist: C&D closing both loops at the same time would lose your LP injection and you would risk restarting the leak when you tried to re-establish injection. This doesn't seem plausible.</p> <p>With pressure at 1770 psig and decreasing, it is plausible to think that RHR could remain isolated since RHR pumps are typically secured in the EOPs when not injecting. Additionally, if the sole location of the leak is the RHR lines, then transition would be made to EOP-2.0 and then to EOP-1.2 to terminate SI. Raised RCS pressure to make higher above shutoff head of RHR (165 psig).</p> <p>Ensure Ops Mgmt ok with asking questions about sequence of steps in procedures.</p> <p>Question SAT 7/26. KDS</p>
72	H	3	X			X								N	U S	<p>WE05 EK2.2 Stem Focus: Will the PZR PORVs open when I still have level in the SGs?</p> <p>As per FR-H.1 basis, RCS pressure and PORV opening at setpoint is a diverse indication for loss of heat sink. Cred Dist: 1st part of C&D, They are told that there is a loss of secondary heat sink in the stem so expecting them to think that the RCPs are secured to minimize coolant loss is not plausible.</p> <p>Replaced with question that has a increased RB pressure and trip due to phase B as a distractor.</p> <p>Question SAT 7/26. KDS</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			
73	H	3												N	S/ U S	WE07 EK1.2 Walk through the procedure path from the point of the trip with a LOCA and SGTR. If the path is valid, the question is SAT. EOP-1.0 would transfer to EOP-2.0 due to LOCA. Reference page criteria would drive transfer to EOP-4.0. Due to LOCA and SGTR, transfer to EOP-4.2 would occur at Step 21. Due to a lack of expected water going to the RHR sump vs. RWST depletion, transfer would occur at step 16. Question SAT 7/26. KDS
74	H	2												N	E S	WE11 EK3.2 Cred Dist: D Minimizing SCM to prevent Thermal Shock is not plausible. Changed to inject accumulators. C plausibility statement is confusing in that it talks about depressurizing SGs. Modified in office. Question SAT 7/26. KDS
75	H	3				X								N	E S	WE16 EK3.2 Cred Dist: A gives no reason. Not required due to the structure of the stem (if so,...) Does an evaluation of integrated radiation dose to the instruments need to be done. It seems like your stating that its not required because limits were not exceeded for B, then you state that it's the reason for the correct answer C. Simplified answer and distracters for clarity. Need a better explanation of why D is incorrect. Adjusted justification statements. Question SAT 7/26. KDS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
76	H	3												N	U/E S	<p>003 AA2.02</p> <p>Is there any way that the CR is within 12 steps of the bank?</p> <p>No. Control Bank A is fully withdrawn at 100% power.</p> <p>Can the CR be moved? Is it operable? It looks like no based on the answer but how is the applicant to know that?</p> <p>This was implied in the original stem but inserted per comment for clarity.</p> <p>Since a SDM is provided, If I assume that the CR is NOT movable (3.1.3.1.a), I have to be in HOT STBY in 6 hours. Adjusting trip setpoints is performed if I am to stay at power.</p> <p>In the case presented the rod is not immovable due to mechanical interference, i.e., it is trippable. This condition does not require shutdown.</p> <p>Licensee to walk through:</p> <p>AOP-403.5 (Misaligned CR), AOP-403.6 Dropped CR, TS.</p> <p>The control rod is trippable, as stated in the stem.</p> <p>Do you really want to ask "below the line" > 1 hour action statements without a reference? Reducing trip setpoints to less than or equal to 85% is a 4 hour requirement. The 85% trip setpoint limit is not listed in the bases. (dmb)</p> <p>Ensure Ops Mgmt is ok with this.</p> <p>Changed to ask which setpoints will be reduced rather than the setpoint. Also changed re-analyzed to reevaluated to be consistent with the bases.</p> <p>Question SAT 8/6. KDS</p>
77	H	3												N	E S	<p>003 G2.2.12</p> <p>If you had a loss of heat sink, assuming that you went through the EOPs (securing RCPs IAW EOP-15) would you remain in Mode 3 or would you be shutting down? The question appears to be technically accurate and at the SRO level, I question its operational validity.</p> <p>Licensee to discuss.</p> <p>The addition of the procedural path or timeline that led to the currently stated conditions could add to the operational validity of the question. (dmb)</p> <p>Removed the discussion of loss of heat sink.</p> <p>Question SAT 8/6. KDS</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			
78	H	3	X			X							X	N	U S	<p>007 A2.02</p> <p>Stem Focus: With the faulted SG and subsequent falling RCS pressure, a PORV suddenly failing open is not plausible. Am I to assume that the SG is dry and the RCS has filled due to SI? If so, its not operationally valid to assume that no operator actions were taken.</p> <p>Choice "C" is not plausible. EOP 1.2 (Safety Injection Termination) does not contain a step for closing the PZR PORV Block Valves. Why would it? (dmb)</p> <p>Choice "A" is not plausible. In EOP-2.0 you <u>check</u> if SI flow should <u>be reduced</u> and then go to EOP-1.2 (Safety Injection Termination) if it should be. (dmb)</p> <p>Why would closing PORV Block Valves be contained in the SI Termination Procedure? This is not an SRO only question. (dmb)</p> <p>Replaced question with one that tests using the SOP to identify a leaking PORV.</p> <p>Question SAT 8/12. KDS</p>
79	H	3				X							X	M	U S	<p>007 EA2.02</p> <p>Cred Dist: 1st part is RO knowledge but that's ok. While the second part is a procedure selection which makes it SRO, not racking out a breaker that is closed is AO knowledge. I don't think you can insert the racking tool if the breaker is closed can you? If you have any procedure that allows this and a breaker that it can be done on, we can discuss. If not, C&D are not plausible.</p> <p>Replaced with question testing actions required to restore ESF bus with alternate source after failure of an EDG to start.</p> <p>Question SAT 8/6. KDS</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
80	H	3	X	X		X								B	U S	<p>011 A2.06</p> <p>Stem Focus: Should the applicants know what step 5 is?</p> <p>Cred Dist/Cue: The stem states that SI is not required and asks what required actions are. The 1st part of A&B state to manually initiate SI. I understand that pressure is continuing to decrease but as the question is written, A&B are not plausible.</p> <p>Will stopping RCP "A" successfully mitigate the depressurization? Will depressurization stop completely? "Successfully" may be open to interpretation (discuss wording).</p> <p>Choice "C" can be eliminated as the only correct answer by itself based on RO knowledge since heaters cannot overcome spray. However, based on EOP-1.1 Alternative Action step 8.b.3), the CRS will direct ensuring PZR Heaters are on. This makes choice "C" a partially correct answer. Also, choice "D" may not be fully correct since the same step in the procedure states that you may have to secure RCP "B" or "C" as well. (dmb)</p> <p>Replaced question with one that tests the same procedure selection but test the use of PORVs and Aux spray.</p> <p>Question SAT 8/6. KDS</p>
81	H	3											X	N	U S	<p>011 EA2.10</p> <p>May not be SRO only.</p> <p>Is it RO knowledge to be able to interpret RVLIS Readings? Is it RO knowledge to be able to identify a red path?</p> <p>Licensee to discuss.</p> <p>Changed question to test whether the conditions indicate whether core cooling is adequate rather than identify a procedure title.</p> <p>Question SAT 8/6. KDS</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	3												N	E S	<p>022 G2.4.50 Spacing on 2nd bullet. Adjusted spacing. Last bullet needs "PND" on the end of the valve name to match the EOP PND was added to valve name in last bullet. Why would the applicants receive EAL classification tables for this question?.....C&P from another question? Question asks about full train of depressurization in accordance with matrix on EAL classification tables so reference is applicable to this question. Stem Focus: In the RNO column for step 7 of Att. 3, if 3107A is not closed, it directs taking the booster pump to PTL and closing 3107A before refilling the system. The way the question is worded (what addresses the condition), filling is incorrect without first securing the booster pump and closing 3107A. Added placing "A" SWBP in PTL and closing 3107A to A and B. Part: In attachment 3, step 7a: Ensure two Service Water Pumps are running. Does "ensure" mean to start the a SW Pump? If so, is "D" correct? The plausibility statement states that if 3107A were closed, it would be correct (referring to RNO step b.1). The procedure states that if 3107A is closed, to start the SW Booster Pump. ????</p> <p>No alarms indicate that SW pumps failed to start. Choices C and D discuss starting the SWBPs and not the SW pumps. Plausibility statement is if 3107A had automatically closed and if it was closed when implementing the step not if operators had to close it. Do not believe that the second part of choice "B" is a correct answer. Does the "A" SWBP actually get started after filling? (dmb)</p> <p>SOP-117 Section IV M has operators start the SWBP after filling the RBCU lines for 10 minutes at step 2.10.</p> <p>Question SAT 8/6. KDS</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
83	F	3											X	M	U S	<p>025 AA2.05</p> <p>Is 461'6" > 23' in the cavity?</p> <p>Are the applicants required to know this?</p> <p>Preventing boron stratification should be added to the answer for choice "A" to match the bases.</p> <p>Question does not appear to be SRO only. Choices "B", "C" and "D" can be eliminated based on RO above the line knowledge. Knowledge of the bases is not required when the question can be answered solely by knowing that cavity level is above 23 feet and one train of RHR is in service. (dmb)</p> <p>Changed to a 2x2 that asks if RHR loops operable meet the specification and for the basis for 2800 gpm</p> <p>Question SAT 8/6. KDS</p>
84	H	3	X											M	E/S S	<p>026 AG2.2.44</p> <p>Walk through the operability of each train.</p> <p>"A" train is inoperable because it does not have support system of CCW to cool it. It is plausible that it might be operable because it can be run indefinitely with local temperature monitoring.</p> <p>"B" train is inoperable because "B" breaker is not racked down. If "B" was racked down and "C" racked up then "B" train would be operable.</p> <p>Stem Focus: Why is the reference provided? It has "above the line" information (memory) and an action. Without reference, question is ok.</p> <p>The reference is provided to provide plausibility for distracters C and D since these items are not required from memory.</p> <p>The first part of choice "D" may not be plausible considering "B" Charging Pump is inoperable and "C" Charging Pump breaker is racked up on "B" Train. (dmb)</p> <p>Racking "C" charging pump onto "B" train would actually make it operable if not for the "B" breaker.</p> <p>Removed extra highlighted space on answer B.</p> <p>Question SAT 8/6. KDS</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	3	X											N	E/S S	<p>028 AA2.02</p> <p>Stem Focus: Why is the reference provided? I would expect an SRO to know from memory.</p> <p>3.0.4 applicability statement and actions required in excess of one hour are not required from memory. If minimum channel requirement was the only item being tested, a reference would not be provided.</p> <p>Action 6 states that startup may continue provided the inoperable channel is placed in the tripped condition within 72 hours. This is not mentioned in the stem so you could argue that "B" is correct.</p> <p>Added "if all applicable action statements are satisfied?" to the end of the stem.</p> <p>Do you expect the SRO to know instrument tolerances from memory? (dmb)</p> <p>ROs should know the instrument tolerances since they are the operators who take the logs and report to the CRS if out of tolerance. Can we provide a copy of the log page containing the tolerance?</p> <p>Question SAT 8/6. KDS</p>
86	H	2												N	E S	<p>036 AG2.4.41</p> <p>The nomenclature for the seismic recorder in bullet 4 does not exactly match the classification matrix. (RDCDR versus RCDR) (dmb)</p> <p>Changed to RCDR.</p> <p>Question SAT 8/6. KDS</p>
87	H	2				X								M	E S	<p>055 EG2.4.21</p> <p>Cred Dist: 1st part of A&B would be ok unless your comparing to the 1st part of C&D. What if RB pressure peaked at 62 psig, then rapidly reduced to 2 psig (something that would indicate containment breach). Would you transfer out of EOP-6.0? We're flirting with SAMGs so I don't want to go there however, when to transfer out of EOP-6 is valid for SROs.</p> <p>Cloned and revised question to provide indications for the two red paths to core cooling and eliminated the RB pressure aspect.</p> <p>Question SAT 8/6. KDS</p>

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88	H	3	X				X							N	E S	<p>062 AG2.4.8</p> <p>Stem Focus: The attached note states that :IF backfill will not cause a loss of SDM or chemistry issue then EOP-4.1A is preferred. With the information given, I don't see how you could fault an applicant for stating that it would and use EOP-4.1C.</p> <p>Part: If you were going to cooldown using steam dumps, would you not be able to use the good SGs. It appears that "C" could be correct also.</p> <p>Caution to EOP-4.1C states "If any RUPTURED SG Narrow Range level is GREATER THAN 90% [83%] this procedure should NOT be used, since water may exist in the steamline."</p> <p>Question SAT 8/8. KDS</p>
89	F	3				X								N	E S	<p>064 A2.03</p> <p>Does VC Summer require SRO operators to know 4 hour specs?</p> <p>The verifications of operability on the train opposite of the inoperable diesel are discussed in the bases.</p> <p>Cred Dist: "B" the assumptions made to make the 2nd part plausible appear to make the "Operable" call not plausible. The same philosophy for the 1st and 2nd part seem to contradict each other.</p> <p>Replaced "Make preparation to lower load within ONE (1) hours" with Verify operability of the "A" EDG. This is plausible because it would be an action if offsite to 1DA was considered inoperable</p> <p>Rearranged choices.</p> <p>Question SAT 8/6. KDS</p>
90	H	3	X											N	E S	<p>068 AG2.4.8</p> <p>Stem Focus: The stem of this question is difficult to put into a sequence.</p> <p>Is EOP-1.1 being run concurrently with FEP-4.0? As I read the question it is. The FEP reference page states that EOP implementation during FEP usage is undesired.</p> <p>It seems that I would have evacuated the CR by the time I had to make the decision to go to EOP-15.0</p> <p>The actual question appears to be ok but the stem needs some work and we need to walk through to verify that its operationally valid.</p> <p>Worked on stem. Placed fire later in timeline and left loss of heat sink and application of EOP-15.0 until after CR evacuation.</p> <p>Question SAT 8/6. KDS</p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
91	H	3				X						X		N	U S	<p>072 G2.4.18</p> <p>Cred Dist: It seems reasonable to assume that RCS pressure is being purposely reduced by using spray to reduce the leak rate. Plus if I'm cooling down by procedure, it seems likely that you will keep the RCPs on until secured by the cooldown procedure. That being said, the second part of B&D appear to not be plausible.</p> <p>Added RM-G19B and C as area radiation monitors to match K/A. Remove discussion of cooldown from second question to make B and D plausible. The step would actually cause RCP trip on low pressure (unless operators know to apply note).</p> <p>Question SAT 8/6. KDS</p>
92	F	3												N	S	073 A2.02
93	H	2												N	S/E S	<p>086 A2.04</p> <p>Is the 2nd part question a direct lookup? (dmb)</p> <p><i>It is not a direct lookup because it requires referencing a drawing and then cross referencing the information obtained to the additional reference. This information is required for Shift Supervisors.</i></p> <p>Question SAT 8/6. KDS</p>
94	H	2				X							X	M	U S	<p>G 2.1.32</p> <p>Why is information on SG A&B there?</p> <p>Removed A and B SG conditions.</p> <p>Cred Dist: 2nd part of A&D don't appear to be plausible next to the second part of B&D.</p> <p>Changed distracters A and C.</p> <p>SRO: This appears to be RO knowledge for RCP start criteria. I looked for an LTOP procedure but couldn't find one. It should be RO knowledge there as well.</p> <p>First half is RO. SRO is being claimed on basis of why not allowed to start.</p> <p>Question SAT 8/6. KDS</p>

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95	H	3	X											N	S/E S	<p>G 2.1.5</p> <p>Without more information about the reason for the TS action, the second part of choices “B” and “D” may also be correct if the applicant considers this would delay recovery from a challenge to a safety system function. Need to discuss. (dmb)</p> <p>Discussed, no change.</p> <p>Question SAT 8/6. KDS</p>
96	F	2				X								M	U S	<p>G 2.2.17</p> <p>Cred Dist: B&C are not plausible when compared to A&D.</p> <p>Replaced question with one that test calculation of risk as an alternate approach to meeting the KA.</p> <p>Question SAT 8/6. KDS</p>
97	F	3	X											N	E S	<p>G 2.2.21</p> <p>Stem Focus: Can the 1st part of the question be dropped? You would have to know the retest requirement to know which TS applies. Need to discuss the attachment. By giving them the TS page, its setting them up to pick the incorrect answer. We need to agree that operations is ok with this aspect of the question.</p> <p>With regard to the original submittal, the second aspect of the question requires the candidate to “freeze” the status of the CCW pumps after racking up one breaker and then make the operability call. In order to maintain that context, the first question needs to be asked. Operations is OK with the question as written.</p> <p>Replaced the question with a revised version that eliminates the “freezing in time” aspect and provides a more realistic scenario in which a single train is restored. The reference is required in this case to provide the answer.</p> <p>Question SAT 8/6. KDS</p>

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			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			
98	H	2				X								N	U S	<p>G 2.3.6 If the wind was from East-Southeast, would "C" be correct? Yes. Does "Should be avoided" meant that you can't restart the release? Yes. Cred Dist: Having to sample the tank before releasing it (when you have made an addition to it) is pretty basic knowledge unless you have an example of when that would not be required. This makes A&B not plausible. Recommend dropping the addition to the tank, keeping the wind direction and asking (1) who has to approve the release and (2) can the release be restarted with the current wind direction. Discuss with examiner that there was a question on the audit that asks who approves a liquid release with one monitor out of service (different system, scenario and question). Changed as per comment to 2x2. Who has to approve (if was >24 hours then would have to get another sample and count room would have to sign off again) and if the current wind direction allows a reestablishing the release. Question SAT 8/6. KDS</p>
99	F	2				X								N	U S	<p>G2.4.28 Cred Dist: A&B are not plausible. D is too obvious as the MOST severe. I am not opposed to another classification question. Replaced question with one that contains hostile action. Question SAT 8/6. KDS</p>

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100			X			X								N	E S	<p>2.4.40 Is there a site assembly for declaring an Alert? If so, assuming the assembly time is 30 minutes, are there going to be issues with the 1530 time being correct? The question is not asking about evac & account.</p> <p>No site assembly for an Alert Cred Dist: Is it stated anywhere to direct non-essential personnel to their residences? EPP-012 states that it is one of the options. 5.3.1 is the exact announcement made and contains the option to release to personal residences. Stem Focus: It appears in the stem that you are aware of the containment breach with a LOCA (2 barriers) and an alert was then declared. It was then another half hour before a SAE was declared with no other information.</p> <p>Revised question to split out loss of the two barriers. So that declare alert after LOCA and then escalate to a Site Area Emergency after the breach in containment.</p> <p>Question SAT 8/6. KDS</p>

Facility:		Date of Exam:		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	☑	N/A	☑		
2. Answer key changes and question deletions justified and documented	☑	N/A	☑		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	☑	N/A	☑		
4. Grading for all borderline cases (80 \pm 2% overall and 70 or 80, as applicable, \pm 4% on the SRO-only) reviewed in detail	☑	N/A	☑		
5. All other failing examinations checked to ensure that grades are justified	☑	N/A	☑		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	☑	N/A	☑		
Printed Name/Signature		Date			
a. Grader	<u>ANDREW GOLDMAN / <i>[Signature]</i></u> FOR A. GOLDMAN		<u>10/2/13</u>		
b. Facility Reviewer(*)	<u>N/A</u>				
c. NRC Chief Examiner (*)	<u>Kenneth Schaefer / <i>[Signature]</i></u>		<u>10/2/13</u>		
d. NRC Supervisor (*)	<u>Mark T. Vignarone / <i>[Signature]</i></u>		<u>10/02/13</u>		
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					