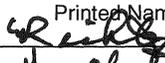
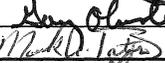
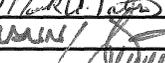
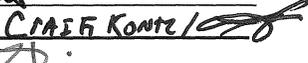


Facility: <u>Farley</u>		Date of Examination: <u>10/08</u>
Developed by: Written - Facility <input checked="" type="checkbox"/> NRC <input type="checkbox"/> // Operating - Facility <input checked="" type="checkbox"/> NRC <input type="checkbox"/>		
Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	CK MB
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	CK MB
-120	3. Facility contact briefed on security and other requirements (C.2.c)	CK MB
-120	4. Corporate notification letter sent (C.2.d)	CK MB
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 3)]	CK MB
{-75}	6. Integrated examination outline(s) due, including Forms ES-201-2, ES-201-3, ES-301-1, ES-301-2, ES-301-5, ES-D-1's, ES-401-1/2, ES-401-3, and ES-401-4, as applicable (C.1.e and f; C.3.d)	CK MB
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	CK MB
{-45}	8. Proposed examinations (including written, walk-through JPMs, and scenarios, as applicable), supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, and ES-401-6, and any Form ES-201-3 updates), and reference materials due (C.1.e, f, g and h; C.3.d)	CK MB
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	CK MB
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	CK MB
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	CK MB
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	CK MB
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	CK MB
-7	14. Final applications reviewed; 1 or 2 (if >10) applications audited to confirm qualifications / eligibility; and examination approval and waiver letters sent (C.2.i; Attachment 5; ES-202, C.2.e; ES-204)	CK MB
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	CK MB
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	CK MB
<p>* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee. [Applies only] {Does not apply} to examinations prepared by the NRC.</p>		

ES-201-2

Examination Outline Quality Checklist

Facility: FA2008-301		Date of Examination: Oct 27 – Nov 10, 2008		
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.	WR	no	MBS CEK
	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.	WR	no	MBS CEK
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	WR	no	MBS CEK
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	WR	no	MBS CEK
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.	WR	no	MBS CEK
	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.	GR	no	MBS CEK
	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.	WR	no	MBS CEK
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.	GR	no	MBS CEK
	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	WR	no	MBS CEK
	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.	GR	no	MBS CEK
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.	WR	no	MBS CEK
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	WR	no	MBS CEK
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	WR	no	MBS CEK
	d. Check for duplication and overlap among exam sections.	WR	no	MBS CEK
	e. Check the entire exam for balance of coverage.	WR	no	MBS CEK
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	GR	no	MBS CEK
a. Author <u>C. Vince Richter /</u>  Printed Name/Signature b. Facility Reviewer (*) <u>Gary Ohmstede /</u>  c. NRC Chief Examiner (#) <u>MARK A. BATES /</u>  <u>CHRIS KONTZ /</u>  d. NRC Supervisor <u>WILCOU T. WIDMANN /</u> 		Date 10-8-08 10/8/2008 10/10/2008 10/20/08		
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 10-27-08 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 10-27-2008. 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. 11-10-2008

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. Charles V. Richter	Nuclear O&S Instructor	[Signature]	4-17-08	[Signature]	11-10-08
2. Sue Bristow	Admin Asst	[Signature]	4-17-08	[Signature]	11-14-08
3. Gary T. Ohmstede	Nuclear Ops Instructor	[Signature]	5-7-08	[Signature]	11/14/08
4. Jay Stremole	Admin Asst	[Signature]	5-14-08	[Signature]	11/11/08
5. Dana McChrishank	Nuc Ops Trng & Supv	[Signature]	5-19-08	[Signature]	11/14/08
6. Clayton L. Christiansen	WORK WEEK COORDINATION	[Signature]	5-19-08	[Signature]	11/19/08
7. Michael Galle	Simulator Coordinator	[Signature]	5-27-08	[Signature]	11/2/08
8. Kevin R. Riley	Nuclear Specialist	[Signature]	8/19/08	[Signature]	11/18/08
9. Bristow, B. Sue	Admin Asst	[Signature]	6-30-08	[Signature]	
10. Key Warren	SSS OPS	[Signature]	7-9-08	[Signature]	
11. Key Warren	SSS-OPS	[Signature]	7-9-08	[Signature]	11/14/08
12. Steve Lee	Plant Operator	[Signature]	7-10-08	[Signature]	11-18-08
13. Josh Carroll	SSS-OPS	[Signature]	7-15-08	[Signature]	11/14/08
14. Willie D. Flournoy	Plant Operator	[Signature]	7-15-08	[Signature]	11-16-08
15. MIKE WILHOIT	PLANT OPERATOR	[Signature]	7-15-08	[Signature]	11-14-08

NOTES:

6-30-08
7-9-08
SB
WR

1. Pre-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	Richard Wells	OPS Manager	<i>[Signature]</i>	7/17/08	<i>[Signature]</i>	11/14/08
2.	Blake Mitchell	SSS	<i>[Signature]</i>	7/17/08	<i>[Signature]</i>	11/19/08
3.	Doyle Sellers	Plant operator	<i>[Signature]</i>	7-22-08	<i>[Signature]</i>	11-14-08
4.	Darryl Stevenson	Control Tech	<i>[Signature]</i>	7-24-08	<i>[Signature]</i>	11-12-08
5.	Taylor Joseph	SSS	<i>[Signature]</i>	8-1-08	<i>[Signature]</i>	11/19/08
6.	Richard Federico	Shift Supv	<i>[Signature]</i>	8-22-08	<i>[Signature]</i>	11-18-08
7.	Phyllis Knight	RO	<i>[Signature]</i>	8-22-08	<i>[Signature]</i>	11-18-08
8.	Terence Crampton	PO	<i>[Signature]</i>	8-22-08	<i>[Signature]</i>	11-18-08
9.	Gary De Courcy	P.U	<i>[Signature]</i>	8-29-08	<i>[Signature]</i>	11-17-08
10.	MAI NAIL	P.O.	<i>[Signature]</i>	8-29-08	<i>[Signature]</i>	11-18-08
11.	Ray Herring	SS	<i>[Signature]</i>	8-29-08	<i>[Signature]</i>	
12.	Ruby Lane	Instructor	<i>[Signature]</i>	9-12-08	<i>[Signature]</i>	11-25-08
13.	Randy Deam	Instructor	<i>[Signature]</i>	9/29/08	<i>[Signature]</i>	11/12/08
14.	Phyllis Knight	PO	<i>[Signature]</i>	11-18-08	<i>[Signature]</i>	11-18-08
15.						

NOTES:

206 3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 10-27-08 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.

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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 ^{10-27-08 to 11-10-08} ~~11-10-2008~~. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	Richard Wells	OPS Manager	<i>[Signature]</i>	7/17/08	<i>[Signature]</i>	11/14/08
2.	Blake Mitchell	SSS	<i>[Signature]</i>	7/17/08	<i>[Signature]</i>	11/19/08
3.	Doyle Sellers	Plant operator	<i>[Signature]</i>	7-22-08	<i>[Signature]</i>	11-14-08
4.	Darryl Stevenson	Control Tech	<i>[Signature]</i>	7-24-08	<i>[Signature]</i>	11-12-08
5.	Taylor Joseph	SSS	<i>[Signature]</i>	8-1-08	<i>[Signature]</i>	11/19/08
6.	Richard Federico	Shifti Supv	<i>[Signature]</i>	8-22-08	<i>[Signature]</i>	11-18-08
7.	Phyllis Knight	RD	<i>[Signature]</i>	8-22-08	<i>[Signature]</i>	11-18-08
8.	Terrence Crampton	PO	<i>[Signature]</i>	8-22-08	<i>[Signature]</i>	11-18-08
9.	Shawn OG Curryers	P.U	<i>[Signature]</i>	8-27-08	<i>[Signature]</i>	11-17-08
10.	MAT NAIL	P.O.	<i>[Signature]</i>	8-29-08	<i>[Signature]</i>	11-18-08
11.	Roy Kerrin	SS	<i>[Signature]</i>	8-29-08	<i>[Signature]</i>	11-20-08
12.	Ruby Lane	Instructor	<i>[Signature]</i>	9-12-08	<i>[Signature]</i>	11-25-08
13.	Randy Olson	Instructor	<i>[Signature]</i>	9/29/08	<i>[Signature]</i>	11/28/08
14.	Phyllis Knight	PO	<i>[Signature]</i>	11-18-08	<i>[Signature]</i>	11-18-08
15.						

NOTES:

206 3

1. **Pre-Examination**

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 10-27-2008 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 ^{10-27-2008 to} 11-10-2008. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
	1. <u>Curtis Ross Armstrong</u>	<u>Ops Instructor / Surrogate STA</u>	<u>[Signature]</u>	<u>10-27-08</u>	<u>[Signature]</u>	<u>11-10-08</u>
*	2. <u>John G. [Signature]</u>	<u>TRAINING MGR / OBSERVATION</u>	<u>[Signature]</u>	<u>10/27/08</u>	<u>[Signature]</u>	<u>11/11/08</u>
	3. <u>Boyd [Signature]</u>	<u>Shift Manager / Observation</u>	<u>[Signature]</u>	<u>10/27/08</u>	<u>[Signature]</u>	<u>11/12/08</u>
	4. <u>Preston F. Willis</u>	<u>Ops Instructor / sequester</u>	<u>[Signature]</u>	<u>11/3/08</u>	<u>[Signature]</u>	<u>11/11/08</u>
*	5. <u>Diggers T. C.</u>	<u>ops instructor / sequester</u>	<u>[Signature]</u>	<u>11/5/08</u>	<u>[Signature]</u>	<u>11/11/08</u>
*	6. <u>Kevin Wilson</u>	<u>ops instructor / sequester</u>	<u>[Signature]</u>	<u>11/5/08</u>	<u>[Signature]</u>	<u>11-11-08</u>
	7.					
	8.					
	9.					
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NOTES: * personnel noted by an * are on the security agreement for the operating exam only.

Facility: <u>Farley Nuclear Plant</u>		Date of Examination: <u>Oct 27, 2008</u>
Examination Level: <u>SRO + RO</u>		Operating Test Number: <u>FA2008301</u>
Administrative Topic (see Note)	Type Code *	Describe activity to be performed
Conduct of Operations RO	R / N	A.1.1 Makeup to the RWST 006A1.02 RO-3.0 SRO-3.6
Conduct of Operations SRO	R / N	A.1.1 Makeup to the RWST SOP-2.3 sect 4.2.3 and determine the Tech specs that are applicable with the out of spec reading given. 006A1.02 RO-3.0 SRO-3.6
Conduct of Operations SRO + RO	R / D / P	A.1.2. CRO-122 Perform A Quadrant Power Tilt Ratio Calculation STP-7.0 015A1.04 RO-3.5 SRO-3.7
Equipment Control RO	R / M	A.2 Complete STP-9.0, DETERMINE RCS LEAK RATE, Appendix 1, and identify conditions that do not meet acceptance criteria. CRO-035 004 A2.22 RO-3.2 SRO-3.1
Equipment Control SRO	R / M	A.2 Complete STP-9.0, DETERMINE RCS LEAK RATE, Appendix 1, and identify conditions that do not meet acceptance criteria. Then apply Tech specs for the conditions that exist. CRO-035 004 A2.22 RO-3.2 SRO-3.1
Radiation Control SRO + RO	R / M	A.3 Determine if a job assigned can be accomplished based on Admin limits and RWP requirements given. G2.3.4 RO-3.2 SRO-3.7
Emergency Plan – SRO ONLY	R / M	A.4 A Site Area emergency exists. Plant and meteorological conditions have changed. Evaluate as the ED whether a follow-up message or an upgrade to a GE is required and fill out applicable forms for notification. An upgrade to a GE will be required and PAR recommendations will be required IAW NMP-EP-109. G2.4.44 SRO-4.4 Time critical JPM
* Type Codes & Criteria: (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) [1/1] (N)ew or (M)odified from bank (≥ 1) [3/4] (P)revious 2 exams (≤ 1 ; randomly selected) [1/1]		

Facility: Farley Nuclear Plant Date of Examination: October 27, 2008		
Exam Level (both): RO SRO-I SRO-u Operating Test No.: FA2008301		
Control Room Systems (8 for RO; 7 for SRO-i; 2 or 3 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
a. CRO-NEW Ramp Down To 540 MW at 4 MW/Min and Perform Corrective Actions In Response To A Malfunction Of The Rod Control System For A Continuous Rod Insertion. 001A2.11 RO-4.4 SRO-4.7	S/ N / A	1 SRO-U
b. CRO- 066D (modified) Borate the RHR system to prepare for RCS cooldown 004A2.10 RO 3.9 SRO 4.2	S/ M/ A/ L	2 SRO-U
c. CRO-333A (modified) Perform the Required Actions for Cold Leg Recirculation starting at step 7 OF ESP-1.3. 011EA1.11 RO-4.2 SRO-4.2	S/ M/ A/ L	3 SRO-U
d. CRO-358B, Place a SGFP on service while in FRP-H.1 W/E05 EA1.1 RO-4.1 SRO-4.0	S / D/ L	4
e. CRO-406E Two Train Verification of ECCS equipment 064A4.06 RO- 3.9 SRO- 3.9	S/ D/ A	6
f. CRO- 328B Restore Instrument Air to Containment 065AA1.03 RO-2.9 SRO-3.1	S/ A/ D/ P	8
g. CRO-NEW Respond to a FH5, SFP AREA RE25A OR B HI RAD, alarm 060AA1.02 RO-2.9 RO-3.1	S/ N / A	9
h. <u>RO ONLY</u> CRO- 343H Align R-11/12 to normal in response to a spurious SI 073A4.02 RO-3.7 SRO-3.7	S/ D /L	7 <u>RO</u> <u>ONLY</u>
In-Plant Systems (3 for RO; 3 for SRO-i; 3 or 2 for SRO-U)		
System / JPM Title	Type Code*	Safety Function
i. SO – 130 Make Up To SFP From the RWST 033A1.01 RO-2.7 SRO-3.3	D / R	8 SRO-U
j. SO-351A Start A 4075 KW Diesel Generator From the DLCP In Mode 4 064A4.01 RO-4.0 SRO-4.3	D / E	6 SRO-U
k. SO-090 Place 'A' BAT O/S & 'B' BAT O/R 004K1.16 RO-3.3 SRO-3.5	D / R	1 or 2

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 [ACTUAL]
(A)lternate path	4-6 / 4-6 / 2-3 [6/6/3]
(C)ontrol room	
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$ [7/6/2]
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$ [1]
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$ [5/4/3]
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$ [4/4/3]
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected) [1/1/0]
(R)CA	$\geq 1 / \geq 1 / \geq 1$ [2]
(S)imulator	

ES-301-3

Operating Test Quality Checklist

Facility: Farley Nuclear Plant		Date of Examination: Oct 27 – Nov 10, 2008		Operating Test Number: FA2008-301	
1. General Criteria		Initials			
		a	b*	c#	
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	WR	no	NBS CHK	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	WR	no	NBS CHK	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	WR	no	NBS CHK	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	WR	no	NBS CHK	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	WR	no	NBS CHK	
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 	WR	no	NBS CHK	
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.	WR	no	NBS CHK	
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.		WR	no	NBS CHK	
	Printed Name / Signature	Date			
a.	Author C. Vince Richter / <u>WR iRichter</u>	10-8-2008			
b.	Facility Reviewer(*) Gary Ohmstede / <u>Gary Ohmstede</u>	10/08/2008			
c.	NRC Chief Examiner (#) <u>MARK A. BATES / Mark A. Bates</u>	10/16/2008			
d.	NRC Supervisor <u>MALCOLM T. WIDMANN / Malcolm T. Widmann</u>	10/20/08			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

Facility: Farley Date of Exam: Oct 27 – Nov 10, 2008 Scenario Numbers: 2 / 3 Operating Test No.: FA2008-301				
QUALITATIVE ATTRIBUTES		Initials		
		a	b*	c#
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	GR	MO	MB CRK
2.	The scenarios consist mostly of related events.	GR	MO	CRK
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) 	GR	MO	MB CRK
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.	GR	MO	MB CRK
5.	The events are valid with regard to physics and thermodynamics.	GR	MO	MB CRK
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	GR	MO	MB CRK
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.	Na	Na	Na
8.	The simulator modeling is not altered.	GR	MO	MB CRK
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.	GR	MO	MB CRK
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.	GR	MO	MB CRK
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	GR	MO	MB CRK
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).	GR	MO	MB CRK
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	GR	MO	MB CRK
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--
1.	Total malfunctions (5–8)	8 / 9		GR MO MB CRK
2.	Malfunctions after EOP entry (1–2)	3 / 3		GR MO MB CRK
3.	Abnormal events (2–4)	3 / 4		GR MO MB CRK
4.	Major transients (1–2)	2 / 1		GR MO MB CRK
5.	EOPs entered/requiring substantive actions (1–2)	2 / 1		GR MO MB CRK
6.	EOP contingencies requiring substantive actions (0–2)	1 / 0		GR MO MB CRK
7.	Critical tasks (2–3)	3 / 4		GR MO MB CRK

Facility: Farley Date of Exam: Oct 27 – Nov 10, 2008 Scenario Numbers: 4 / 5 / 6 Operating Test No.: FA2008-301					
QUALITATIVE ATTRIBUTES		Initials			
		a	b*	c#	
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	WR	no	MB CRK	
2.	The scenarios consist mostly of related events.	WR	no	MB CRK	
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) 	WR	no	MB CRK	
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.	WR	no	MB CRK	
5.	The events are valid with regard to physics and thermodynamics.	WR	no	MB CRK	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	WR	no	MB CRK	
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.	Na	Na	Na	
8.	The simulator modeling is not altered.	WR	no	MB CRK	
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.	WR	no	MB CRK	
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.	WR	no	MB CRK	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	WR	no	MB CRK	
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).	WR	no	MB CRK	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	WR	no		
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--	
1.	Total malfunctions (5–8)	6 / 5 / 7	WR	no	MB CRK
2.	Malfunctions after EOP entry (1–2)	2 / 4 / 3	WR	no	MB CRK
3.	Abnormal events (2–4)	4 / 5 / 4	WR	no	MB CRK
4.	Major transients (1–2)	1 / 2 / 3	WR	no	MB CRK
5.	EOPs entered/requiring substantive actions (1–2)	1 / 2 / 2	WR	no	MB CRK
6.	EOP contingencies requiring substantive actions (0–2)	1 / 1 / 1	WR	no	MB CRK
7.	Critical tasks (2–3)	3 / 2 / 4	WR	no	MB CRK

ES-301-5

Transient and Event Checklist

		Scenarios																
A P P L I C A N T	E V E N T T Y P E	3			4			5			6			T O T A L	M I N I M U M (*)			
		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				R	I	U	
		S R O	A T C	B O P														
SRO-I x SRO-U x	RX	1	6		4						1	5		5	1	1	0	
	NOR				2			3						2	1	1	1	
	I/C	2	3	4	1	3	4	1	2	4		1	2	3	21	4	4	2
	MAJ	7			7	9		5	6			6	9	10	8	2	2	1
	TS	3	4		3	5		1	4			3	5		8	0	2	2
RO x SRO-I x SRO-U x	RX		1	6		4						1	5	5	1	1	0	
	NOR													1	1	1	1	
	I/C		3	4	8		1	5	6	2	3	5	2	4	12	4	4	2
	MAJ		7			7			5	6			6	9	7	2	2	1
	TS		3	4			3	5		1	4			3	8	0	2	2
RO x SRO-I x	RX			1			4							2	1	1	0	
	NOR						2						5	2	1	1	1	
	I/C			2	5	9	10	3	4	6	8		1	3	15	4	4	2
	MAJ			7			7	9			5	6		6	8	2	2	1
	TS			3	4			3	5			1	4		8	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.

ES-301-5

Transient and Event Checklist

Facility: Farley Nuclear Plant **Date of Exam:** Oct 27 – Nov 10, 2008 **Operating Test No.:** FA2008-301

A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		2													R	I	U
		CREW POSITION															
		S R O	A T C	B O P													
SRO-I x SRO-U x	RX	1											1	1	1	0	
	NOR	4											1	1	1	1	
	I/C	2 3 5 6 8											5	4	4	2	
	MAJ	7 9											2	2	2	1	
	TS	5 6											2	0	2	2	
RO x SRO-I x SRO-U x	RX		1										1	1	1	0	
	NOR		4										1	1	1	1	
	I/C		3 5 6										3	4	4	2	
	MAJ		7 9										2	2	2	1	
	TS		5 6										2	0	2	2	
RO x SRO-I x	RX			1									1	1	1	0	
	NOR													1	1	1	
	I/C			2 5 8 10 11									5	4	4	2	
	MAJ			7 9									2	2	2	1	
	TS			5 6									2	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.

ES-301-6

Competencies Checklist

Facility: Farley Nuclear Plant **Date of Examination:** Oct 27 – Nov 10, 2008 **Operating Test No.:** FA2008-301

Competencies	APPLICANTS											
	RO X				SRO-I X				SRO-U X			
	SCENARIO				SCENARIO				SCENARIO			
	3	4	5	6	3	4	5	6	3	4	5	6
Interpret/Diagnose Events and Conditions	23	13	12	12	23	13	12	12	234	13	12	12
	45	45	45	34	45	45	45	34	567	45	45	34
	67	78	6	56	67	78	6	56	8910	78	6	56
	89			78	89			78				78
	10			9	10			910				910
			10									
Comply With and Use Procedures (1)	12	12	12	12	12	12	12	12	123	12	12	12
	34	34	34	34	34	34	34	34	456	34	34	34
	56	56	56	56	56	56	56	56	78	56	56	56
	78	7		7	78	7		710		7		710
				10								
Operate Control Boards (2)	12	12	12	12								
	34	34	34	34								
	56	57	56	56								
	78	89		78								
	9			9								
10			10									
Communicate and Interact	12	12	12	12	12	12	12	12	123	12	12	12
	34	34	34	34	34	34	34	34	456	34	34	34
	56	56	56	56	56	56	56	56	7	56	56	56
	7	7		78	7	7		78		7		78
				9				910				910
			10									
Demonstrate Supervisory Ability (3)					12	13	12	12	123	13	12	12
					34	45	34	34	456	45	34	34
					56	67	56	56	7	67	56	56
					7	9		79		9		79
								10				10
Comply With and Use Tech. Specs. (3)					34	35	14	35	34	35	14	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.

ES-301-6

Competencies Checklist

Facility: Farley Nuclear Plant **Date of Examination:** Oct 27 – Nov 10, 2008 **Operating Test No.:** FA2008-301

Competencies	APPLICANTS											
	RO X				SRO-I X				SRO-U X			
	SCENARIO				SCENARIO				SCENARIO			
	2				2				2			
Interpret/Diagnose Events and Conditions	2 3 5 6 7 8 9 10 11				2 3 5 6 7 8 9 10 11				2 3 5 6 7 8 9 10 11			
Comply With and Use Procedures (1)	1 2 3 4 5 6 7 8 9 10 11				1 2 3 4 5 6 7 8 9 10 11				1 2 3 4 5 6 7 8 9 10 11			
Operate Control Boards (2)	1 2 3 4 5 6 8 9 10 11											
Communicate and Interact	1 2 3 4 5 6 7 9				1 2 3 4 5 6 7 9				1 2 3 4 5 6 7 9			
Demonstrate Supervisory Ability (3)					2 3 5 6 7 9				2 3 5 6 7 9			
Comply With and Use Tech. Specs. (3)					5 6				5 6			

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: <i>Farley</i>		Date of Exam: <i>10/11/2008</i>															
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	2	4	N/A			3	4	N/A			2	18	3	3	6
	2	2	2	1	N/A			1	2	N/A			1	9	2	2	4
	Tier Totals	5	4	5	N/A			4	6	N/A			3	27	5	5	10
2. Plant Systems	1	3	2	2	3	3	3	2	3	2	2	3	28	2	3	5	
	2	1	1	1	1	1	1	1	1	1	0	1	10	1	2	3	
	Tier Totals	4	3	3	4	4	4	3	4	3	2	4	38	3	5	8	
3. Generic Knowledge and Abilities Categories					1	2	3	4	10	1	2	3	4	7			
					3	2	2	3		1	2	2	2				

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

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
007EA2.01	Reactor Trip - Stabilization - Recovery / 1	4.1	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"/>	Decreasing power level from available indications
Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)														
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"/>	Controllers and positioners
Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)														
009EK3.16	Small Break LOCA / 3	3.8	4.1	<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"/>	Containment temperature, pressure, humidity and level limits
Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)														
015AG2.4.50	RCP Malfunctions / 4	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.
This is a Generic, no stem statement is associated.														
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
Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)														
026AK3.03	Loss of Component Cooling Water / 8	4	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Guidance actions contained in EOP for Loss of CCW
Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)														

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:					
		RO	SRO																		
001AK3.02	Continuous Rod Withdrawal / 1	3.2	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tech-Spec limits on rod operability				
				Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)																	
003AK2.05	Dropped Control Rod / 1	2.5	2.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Control rod drive power supplies and logic circuits
				Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)																	
033AA2.02	Loss of Intermediate Range NI / 7	3.3	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Indications of unreliable intermediate-range channel operation							
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)																	
059AG2.4.49	Accidental Liquid RadWaste Rel. / 9	4.6	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.
				This is a Generic, no stem statement is associated.																	
061AK2.01	ARM System Alarms / 7	2.5	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Detectors at each ARM system location
				Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)																	
076AA1.04	High Reactor Coolant Activity / 9	3.2	3.4	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Failed fuel-monitoring equipment
				Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)																	

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
WE03EK1.2	LOCA Cooldown - Depress. / 4	3.6	4.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal, abnormal and emergency operating procedures associated with (LOCA Cooldown and Depressurization).
				Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)										
WE08EK1.2	RCS Overcooling - PTS / 4	3.4	4.0	<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).
				Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)										
WE15EA2.1	Containment Flooding / 5	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"/>	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.
				Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:							
		RO	SRO																				
003K5.01	Reactor Coolant Pump	3.3	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 relationship between the RCPS flow rate and the nuclear reactor core operating parameters (quadrant power tilt, imbalance, DNB rate, local power density, difference in loop T-hot pressure)
004A3.02	Chemical and Volume Control	3.6	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Letdown isolation							
004K6.02	Chemical and Volume Control	2.5	2.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	Demineralizers and ion exchangers
005K5.05	Residual Heat Removal	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"/>	<input 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"/>	Plant response during "solid plant": pressure change due to the relative incompressibility of water
005K6.03	Residual Heat Removal	2.5	2.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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"/>	RHR heat exchanger
006K1.08	Emergency Core Cooling	3.6	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CVCS
007G2.1.7	Pressurizer Relief/Quench Tank	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 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"/>	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
008K4.09	Component Cooling Water	2.7	2.9	<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"/>	The "standby" feature for the CCW pumps
Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)														
010A4.01	Pressurizer Pressure Control	3.7	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PZR spray valve
Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)														
010K1.05	Pressurizer Pressure Control	3.4	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"/>	PRTS
Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)														
012K3.02	Reactor Protection	3.2	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"/>	T/G
Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)														
013A2.01	Engineered Safety Features Actuation	4.6	4.8	<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"/>	LOCA
Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)														
013K5.02	Engineered Safety Features Actuation	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"/>	Safety system logic and reliability
Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)														

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G											TOPIC:					
		RO	SRO																	
022A2.01	Containment Cooling	2.5	2.7	<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"/>	Fan motor over-current					
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)																
022G2.4.20	Containment Cooling	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.				
				This is a Generic, no stem statement is associated.																
026K3.02	Containment Spray	4.2	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recirculation spray system					
				Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)																
039A4.04	Main and Reheat Steam	3.8	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"/>	<input type="checkbox"/>	Emergency feedwater pump turbines					
				Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)																
059A3.03	Main Feedwater	2.5	2.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Feedwater pump suction flow pressure					
				Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)																
061K6.01	Auxiliary/Emergency Feedwater	2.5	2.8	<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"/>	Controllers and positioners					
				Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)																
062K4.01	AC Electrical Distribution	2.6	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"/>	Bus lockouts					
				Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)																

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:		
		RO	SRO															
062K4.03	AC Electrical Distribution	2.8	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Interlocks between automatic bus transfer and breakers Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)
063K2.01	DC Electrical Distribution	2.9	3.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Major DC loads Knowledge of electrical power supplies to the following:(CFR: 41.7)
064A1.02	Emergency Diesel Generator	2.5	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fuel consumption rate with load Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)
073A2.02	Process Radiation Monitoring	2.7	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Detector failure Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)					
076A1.02	Service Water	2.6	2.6	<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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor and turbine building closed cooling water temperatures. Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)
076K2.08	Service Water	3.1	3.3	<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"/>	<input type="checkbox"/>	ESF-actuated MOVs Knowledge of electrical power supplies to the following:(CFR: 41.7)

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:			
		RO	SRO																
078K1.03	Instrument Air	3.3	3.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment air
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)															
103G2.4.4	Containment	4.5	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.
				This is a Generic, no stem statement is associated.															

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
001K5.07	Control Rod Drive	3.3	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effects of an asymmetric rod configuration on power distribution
Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)														
002A2.04	Reactor Coolant	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"/>	Loss of heat sinks
Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)														
011K2.01	Pressurizer Level Control	3.1	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"/>	Charging pumps
Knowledge of electrical power supplies to the following:(CFR: 41.7)														
015K6.01	Nuclear Instrumentation	2.9	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sensors, detectors and indicators
Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)														
027G2.1.27	Containment Iodine Removal	3.9	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 system purpose and or function.
This is a Generic, no stem statement is associated.														
029K4.02	Containment Purge	2.9	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"/>	Negative pressure in containment
Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)														
035A3.01	Steam Generator	4.0	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"/>	S/ G water level control
Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)														

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
041A1.01	Steam Dump/Turbine Bypass Control	2.9	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	T-ave. verification above low/low setpoint
Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)														
055K3.01	Condenser Air Removal	2.5	2.7	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Main condenser
Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)														
056K1.03	Condensate	2.6	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"/>	<input type="checkbox"/>	<input type="checkbox"/>	MFW
Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)														

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:					
		RO	SRO																		
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 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.
G2.1.21	Conduct of operations	3.5	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability verify the controlled procedure copy.
G2.1.36	Conduct of operations	3.0	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of procedures and limitations involved in core alterations
G2.2.13	Equipment Control	4.1	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of tagging and clearance procedures.
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 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.
G2.3.13	Radiation Control	3.4	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 procedures pertaining to licensed operator duties
G2.3.4	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiation exposure limits under normal and emergency conditions

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
G2.4.26	Emergency Procedures/Plans	3.1	3.6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.								
G2.4.28	Emergency Procedures/Plans	3.2	4.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of procedures relating to emergency response to a security event (non-safeguards information).								
G2.4.5	Emergency Procedures/Plans	3.7	4.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the organization of the operating procedures network for normal, abnormal and emergency evolutions.								

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
008AG2.1.32	Pressurizer Vapor Space Accident / 3	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.
				This is a Generic, no stem statement is associated.										
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
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
025AA2.02	Loss of RHR System / 4	3.4	3.8	<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"/>	Leakage of reactor coolant from RHR into closed cooling water system or into reactor building atmosphere
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
056AG2.2.40	Loss of Off-site Power / 6	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.
				This is a Generic, no stem statement is associated.										
065AA2.06	Loss of Instrument Air / 8	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"/>	When to trip reactor if instrument air pressure is decreasing
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
we04EG2.1.7	LOCA Outside Containment / 3	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.
				This is a Generic, no stem statement is associated.										

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:			
		RO	SRO																
028AG2.1.7	Pressurizer Level Malfunction / 2	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This is a Generic, no stem statement is associated.	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation.
068AA2.02	Control Room Evac. / 8	3.7	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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Local boric acid flow		
076AG2.1.32	High Reactor Coolant Activity / 9	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	This is a Generic, no stem statement is associated.	Ability to explain and apply all system limits and precautions.		
WE10EA2.1	Natural Circ. With Seam Void/ 4	3.2	3.9	<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"/>	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.			

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:	
		RO	SRO														
012G2.4.2	Reactor Protection	4.5	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of system set points, interlocks and automatic actions associated with EOP entry conditions.
				This is a Generic, no stem statement is associated.													
039G2.4.1	Main and Reheat Steam	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of EOP entry conditions and immediate action steps.	
				This is a Generic, no stem statement is associated.													
062G2.2.36	AC Electrical Distribution	3.1	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions of operations		
				This is a Generic, no stem statement is associated.													
063A2.02	DC Electrical Distribution	2.3	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"/>	Loss of ventilation during battery charging			
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)													
103A2.02	Containment	2.2	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"/>	Necessary plant conditions for work in containment				
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)													

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:					
		RO	SRO																		
016G2.2.40	Non-nuclear Instrumentation	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 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.
				This is a Generic, no stem statement is associated.																	
033A2.01	Spent Fuel Pool Cooling	3.0	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Inadequate SDM							
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)																	
055G2.1.19	Condenser Air Removal	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 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.
				This is a Generic, no stem statement is associated.																	

KA	NAME / SAFETY FUNCTION:	IR		K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G												TOPIC:					
		RO	SRO																		
G2.1.3	Conduct of operations	3.7	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of shift or short term relief turnover practices.
G2.2.1	Equipment Control	4.5	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to perform pre-startup procedures for the facility, including operating those controls associated with plant equipment that could affect reactivity.
G2.2.36	Equipment Control	3.1	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions of operations
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 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
G2.3.7	Radiation Control	3.5	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to comply with radiation work permit requirements during normal or abnormal conditions
G2.4.35	Emergency Procedures/Plans	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 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 local auxiliary operator tasks during emergency and the resultant operational effects
G2.4.38	Emergency Procedures/Plans	2.4	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 type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to take actions called for in the facility emergency plan, including supporting or acting as emergency coordinator.

Tier / Group	Randomly Selected K/A	Reason for Rejection
T1G1/SRO	008AG2.1.32	008AG2.2.4 was replaced with concurrence from Mark Bates with a randomly generated KA. This KA was not valid for FNP. 5/29/2008 per phone call.
T1G2/SRO	028AG2.1.7	028AG2.4.8 was replaced with concurrence from Mark Bates with a randomly generated KA. This KA was not valid for FNP. 5/29/2008 per phone call.
T1G2/RO	033AA2.02	060AA2.03 was replaced with concurrence from Mark Bates with a randomly generated KA. This KA had overlap concerns with another area of the exam. Also to write a multiple choice question to this KA using P&IDs and that a candidate can answer in 3 to 5 minutes that does not give away answers to other questions and to make it discriminatory for this exam is a concern among the exam authors.
T2G2/RO	001K5.04	071K5.04 03 was replaced with concurrence from Mark Bates with a randomly generated KA. This question could only be written at a low level of difficulty for an RO, (i.e., level 1) or written at a SRO level. This topic is being tested on the SRO portion of the exam which would be in conflict with the RO portion of the exam.
T3/SRO	G2.2.36	G2.2.15 was replaced with concurrence from Craig Kontz and a peer checker with a randomly generated KA. This KA did not yield a suitable written exam question, but would have been more suitable for an ADMIN JPM, since several references would have needed to be provided.
T3/RO	G2.3.13	G2.3.15 does not apply to FNP since the KA tests knowledge of radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc., and FNP does not require that detailed knowledge for our radiation workers. (We do not have Advanced radiation workers) A question written to the detail of the knowledge at FNP would constitute either minutia or a level 1 question.
T1G1/RO	E11EA1.2	E04EA1.1 directly conflicted with the SRO exam and a different KA but same topic. Since there is not much in the way of procedural guidance and background, there is little to examine on without incurring overlap.
T2G2/RO	001K5.07	001K5.04 since there are no operational implications of the RIL on the rods.
T1G1/RO	027AA2.06	027AG2.4.6 since there are no EOP mitigation strategies for PRZR pressure control malfunctions, only AOP strategies.
T2G2/SRO	016G2.2.40	028A2.01 could not meet the KA at an SRO level.
T2G2/SRO	033A2.01	071G2.1.20 could not meet the KA at an SRO level without many references.

ES-401-6

Written Examination Quality Checklist

Facility:	FA2008-301	Date of Exam:	Oct 27 – Nov 10, 2008	Exam Level:	RO X	SRO X	
Item Description				Initial			
				a	b*	c#	
1.	Questions and answers are technically accurate and applicable to the facility.			CR	NO	NBS CRK	
2.	a.	NRC K/As are referenced for all questions.		CR	NO	NBS	
	b.	Facility learning objectives are referenced as available.			NO	CRK	
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401			CR	NO	NBS CRK	
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).					NBS CRK	
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input checked="" type="checkbox"/> the audit exam was systematically and randomly developed; or <input checked="" type="checkbox"/> the audit exam was completed before the license exam was started; or <input type="checkbox"/> the examinations were developed independently; or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)			CR	NO	NBS CRK	
6.	Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank	Modified	New	CR	NO	NBS CRK
		23 / 2	10 / 0	42 / 23			
7.	Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/ analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory		C/A	CR	NO	NBS CRK
		32 / 6		43 / 19			
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.			CR	NO	NBS CRK	
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.			CR	NO	NBS CRK	
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.			CR	NO	NBS CRK	
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.			CR	NO	NBS CRK	
		Printed Name / Signature				Date	
a. Author	C. Vince Richter / <i>[Signature]</i>				10-8-08		
b. Facility Reviewer (*)	Gary Ohmstede / <i>[Signature]</i>				10/08/2008		
c. NRC Chief Examiner (#)	MARK A. BATES / <i>[Signature]</i>				10/16/2008		
d. NRC Regional Supervisor	LAWRENCE T. WIDMANN / <i>[Signature]</i>				10/20/08		
Note:	* The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.						

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only				

Instructions

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

- Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
- 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).
- 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).
- 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.
- 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).
- Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of ES-401 Section D.2.f.
- 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?
- 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 Flaw s					4. Job Content Flaw s				5. Other		6 B/M/N	7 U/E/S
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Mnutia	#/ units	Back- ward	Q= K/A	SRO Only		

1 H 2 N E

001AK3.02

The question is required to be enhanced to address the following:

DA indicates that 3.1.4 Cond B would be applicable - but with 2 rods out of alignment condition D would be applicable. Basis for D.1.1 indicates that SDM is the concern. This potentially allows for 2 or 0 correct answers.

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors. Including the diagnosis after each TS makes the first part of each answer unique. This lowers the discriminatory value of the question by removing the diagnosis requirement of the question and making the second part of the question irrelevant.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.1.f. of NUREG 1021 Appendix B – Limit question to one concept or topic, unless synthesis of concepts is being tested.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Remove second bullet from questions
Question Sat

2 H 3 M U

001K5.04

The question is unsatisfactory and is required to be changed to address:

Question does meet the intent of the KA statement. The question tests the effect of rod position on RIL and SDM not the Knowledge of the operational implications of RIL as they apply to the Control Rod Drive system.

Section C.1.b. of NUREG 1021 Appendix B - The question needs to match the intent of the K/A.

KA to be replaced - not able to derive a discriminatory question new KA 001K5.07

New Question Sat

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

3 H 2 N E

002A2.04

The question is required to be enhanced to address question clarity:

Having FRP-H.1 in the same sentence questioning about a loss of heat sink could cause some confusion as if it is asking for the requirements of FRP-H.1. Need to split into 2 sentences to avoid confusion.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Question will be reworded to prevent possible confusion.

Sat

4 F 3 N E

003AK2.05

The question is required to be enhanced to address:

By using the terms "Affected" and "Unaffected" in the options, it does not require the applicant to identify which cabnite(s) is/are affected and decreases the plausibility of a distractor by labeling it "Unaffected". Replacing with actual cabinet designations would alleviate this.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Distractor B will have actual cabinet substituted for "Affected"
 Distractor D may refer to multiple cabinets - if so then add "s" to cabinet - if not change to address specific cabinet

SAT

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

5 F 2 N E

003K5.01

The question is required to be enhanced to address:

Use of the phrase "Significant Period Of Time" is too ambiguous to ensure the question has only one correct answer.

Exceeding QPTR limits is not a credible distractor for the given plant conditions and question asked.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

* "Significant time period" is to be removed from the question. QPTR left as distractor.

SAT

6 H 3 M S

004A3.02

7 H 2 N E

004K6.02

The question is required to be enhanced to address question clarity:

The stem specifies that the demineralizer was not flushed but does not give a condition to that would indicate to the applicant that the demineralizer was not vented. This diminishes the plausibility of distractors C & D. Clarification of exactly what portion(s) of SOP-2.1 were or were not performed before placing cation bed in service in order to eliminate any potential confusion regarding system status and enhance distractor plausibility.

Section C.1.a. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Correct DA with correct procedure (SOP-2.5)

Focus stem to include actual procedure reference.

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

8 H 3 B E

005K5.05

The question is required to be enhanced to address the following:

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors. The inclusion of the response of PCV-145 to changes in Letdown pressure and the purpose for the response are informational and not required for selection of the correct answer.

Section C.1.f. of NUREG 1021 Appendix B – Limit question to one concept or topic, unless synthesis of concepts is being tested.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Remove PCV-45 from choices

SAT

9 H 3 B S

005K6.03

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

10 F 3 M E

006K1.08

The question is required to be enhanced to address the following:

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Question statement containing conditions that should be incorporated into the plant conditions portion of the stem.

Options are long and confusing.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.1.f. of NUREG 1021 Appendix B – Limit question to one concept or topic, unless synthesis of concepts is being tested.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Remove unnecessary information from choices.

Use suction source information only.

SAT

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

11 F 2 N E

007EA2.01

The question is required to be enhanced to address:

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Stem statement uses "was operating" in start of sentence and "is lost" at end - tense usage.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.1.f. of NUREG 1021 Appendix B – Limit question to one concept or topic, unless synthesis of concepts is being tested.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Remove SUR from all choices.

SAT

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

12 H 3 B E

007G2.1.7

The question is required to be enhanced to address the following:

Plant conditions in stem are not necessary for answering question. Only PRT conditions relevant.

SOP-1.2 is in all options - should be in stem

HE3 is in 2 answers - other 2 are unique.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Remove first part of choices.
Move procedure reference to stem
Reword question

SAT

13 H 3 B E

008AK2.03

The question is required to be enhanced to address the following:

Weather or not operator actions have been taken needs to be addressed in the stem.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Add "no operator actions have been taken" statement to stem

SAT

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

14 F 3 B E

008K4.09

The question is required to be enhanced to address the following:

A,B, and C are subsets of D. ONLY is needed for each to ensure clarity of choices

Section C.2.m.4 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including options that include another option.

Add only to choices A,B, and C.

SAT

15 H 5 N U

009EK3.16

The question is unsatisfactory and is required to be changed to address:

The first half of all options are unique. Therefore, the second half of each option is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Question appears to be testing procedure transition requirements at an SRO level.

Question is not testing the reasons for the (Containment temperature, pressure, humidity and level limits) as they apply a small break LOCA and therefore does not meet the intent of the KA.

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.b. of NUREG 1021 Appendix B - The question needs to match the intent of the K/A.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Change Question to 2X2
Changed

SAT

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

16 H 3 N E

010A4.01

The question is required to be enhanced to address the following:

Distractor analysis for A does not agree with question stem; DA says 40% stem says 35%

DA will be changed

SAT

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

17 H 2 **B U**

010K1.05

The question is unsatisfactory and needs to be changed to address multiple implausible distractors:

Implausible distractors

1. The PRT does not have TS limits, therefore making distractor A referencing TS limits for the PRT is not plausible.
2. The PRT is designed to accept the lifting from a PORV without creating an explosive environment, therefore creating an explosive mixture from a PORV "blowing by" would not be plausible.
3. The rate of PORV leakage is not specifically stated in the stem of the question. Depending on the leakrate, the temperature and pressure effects on the PRT would be very different. DA for distractor D is premised on the applicants knowledge of isenthalpic processes, the PRT is a saturated steam system, and that the leakrate would be sufficient enough for temperature in the PRT to rise above 216F prior to pressure increasing above rupture disc setpoint. The PRT is NOT a saturated steam system, it has a Nitrogen atmosphere. Even if the leakrate was given, knowledge of specific heat transfer characteristics of the PRT with varied leakrates is beyond the scope of operator requirements.
4. The stem of the question states that the temperature and pressure of the PRT are rising, decreasing the plausibility of distractors A & B.

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.a. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Change Q to a 2X2 format
Add Tailpiece temp

SAT

18 F 2 **B S**

011K2.01



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

19 H 3 B E

012K3.02

The question is required to be enhanced to address the following:

Distractor A is not a plausible distractor at 25% PWR.

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Add "Maintaining level on FRV's" to stem
Remove unnecessary information from choices (second half)

20 F 3 N E

013A2.01

The question is required to be enhanced to address the following:

Question is testing knowledge of relay operation and ability to reset SI. ESP-1.2, specifically discusses resetting SI and MLB1, 1-1 and 1-11. One of the lights would have to not extinguished to apply RNO as described in distractor analysis.

Question is very cumbersome and requires editing to increase clarity.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Question/stem will be reworded to remove unnecessary information.
Stem will have one annunciator staying lit
Remove MOV references

SAT

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

21 F 3 B E
 013K5.02

The question is required to be enhanced to address the following:

Need to clarify the definition of "remove from service"

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Change to "Place in Test"

SAT

22 H 3 B U
 015AG2.4.5

The question is unsatisfactory and needs to be changed to address the following:

Question does not meet intent of KA. Question does not test ability to verify system setpoints.

Stem includes indications of #1 Seal leakoff flow and #1 Seal DP making alarms irrelevant in determining required actions of AOP. This makes knowledge of alarm setpoints unnecessary for determining correct answer.

Section C.1.b. of NUREG 1021 Appendix B - The question needs to match the intent of the K/A.

Insert actual indication
 Remove Annunciator reference
 Add pump vibration to make 2X2 format

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

23 F 2 B E

015K6.01

The question is required to be enhanced to address the following:

Distracto:

Distractor A has "Operable" in the distractor and the other options do not.

Stem of question contains information not required to answer the question. Failure is a "Red Herring" - doesn't effect answer

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Remove Operable
Cannot be manually reinstated - rework question

SAT

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

24 H 2 N U

022A2.01

The question is unsatisfactory and needs to be changed to address multiple implausible distractors:

Implausible distractors

1. Starting B Fan in Fast speed with A fan available and the stem indicating B fan has a fault alarm make distractors A & C implausible.

2. Knowledge that fast speed fans will not run after an SI is the only piece of information needed to answer question. This allows the applicant to eliminate all distractors without determining if the applicant has the knowledge required by the K/A.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Section C.1.B. of NUREG 1021 Appendix B - The question needs to match the intent of the K/A.

Question changed to affect 1A fan

Change format to 2 part first half and second half using first half as qualifier for 2X2

SAT

25 F 2 B S

022G2.4.20

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
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only			

26 H 4 B E

025AA2.05

The question is required to be enhanced to address the following:

Distractor A reads opposite of P&L even though P&L does not apply in this situation. Decreases plausibility of distractors.

The first half of all options are unique. Therefore, the second half of each option is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Section C.1.f. of NUREG 1021 Appendix B – Limit question to one concept or topic, unless synthesis of concepts is being tested.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Changed distractors to give band for flow rate
Removed explanations

SAT

27 F 2 N S

026AK3.03

28 H 4 N S

026K3.02

Potential issue with the premise that the check valve will prevent potential air introduction into the CS pump and cause air binding. Suction head on pump not very significant. Need to discuss.

Discussed with licensee and assured that static head on pump suction sufficient to hold check valve closed.

SAT



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

29 F 3 M U

027AG2.4.6 The question is unsatisfactory and needs to be changed to address the following:

Multiple Implausible distractors

1. Procedures require that the reactor is to always be tripped prior to securing RCPs. This makes C & D distractors implausible.

K/A Match

1. K/A addresses EOP strategies - -Question written for AOP procedure steps.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Section C.1.B. of NUREG 1021 Appendix B - The question needs to match the intent of the K/A.

Resampled KA - 027AA2.06

SAT

30 F 3 N E

027G2.1.27 The question is suggested to be enhanced to address the following:

Symmetry between distractors - 2 use "so that" and 2 use "to ensure that"

Changed choices to make symmetrical use of "in order to"

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

31 H 3 B U

029EK1.05

The question is unsatisfactory and needs to be changed to address multiple implausible distractors:

- distractor A - Not plausible to provide full AFW flow to add negative reactivity. Basic knowledge of reactivity coefficients makes this distractor implausible.
- distractor D - Not Plausible to depressurize RCS to 200# during ATWS - fouled by Q 39 - Concept of distractor is correct - only 200# is incorrect

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Replaced question with one from 2008 NA exam

SAT

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

32 F 2 N E

029K4.02

The question is required to be enhanced to address the following:

The first half of all options are unique. Therefore, the second half of each option is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Options include information not required for answering the question. Additional information decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Changed to a 2X2 format using B&C first halves

Reworded question to focus stem.

SAT

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

33 H 4 N E

033AA2.02

The question is required to be enhanced to address the following:

Stem needs to specify that IR channel indications have "leveled off" or stabilized.

Options indicate which channel of IR indication is faulty, KA requires a diagnosis of an unreliable indication.

Section C.1.b. of NUREG 1021 Appendix B - The question needs to match the intent of the K/A.

Added "IR indication leveled off"
 Removed second part of choices
 Changed 2 of the choises to N-35

SAT

34 H 3 B E

035A3.01

The question is required to be enhanced to address the following:

Distractor B is not plausible for FRV to end up in a position more open than started. Also the symmetry between A/B is not consistent with symmetry of C/D. Change to agree with A - return to a position more closed than original position.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Changed B distractor to "return to a more closed position"

SAT

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

35 F 3 **B** **E**

038EA1.34

The question is required to be enhanced to address the following:

The options need to specify which loop the distractors are addressing. In tact or ruptured.

Distractor C - Stagnant loop temperature rising is not a plausible concept for the given conditions. Suggest change "slow rise in cold leg temp due to loop being stagnant" to "slow rise in cold leg temp due to reversing flow in ruptured loop". - Actual effect is rapid cooling due to SI flow.

Distractor D - Rapid rise in containment pressure from PRT rupture not a plausible concept.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Identify which loops are referenced in choices
Change to a 2X2 format
Effect / Cause

SAT



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

36 H 3 N E

039A4.04

The question is required to be enhanced to address the following:

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors. The position of HV-3235A/B does not appear to be able to be determined from information given in stem. Also their valve positions are not relevant in the options. Options give a choice between HV-3226 being "open" or "leaking by".

The use of "and/or" inherently adds ambiguity to the question.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Replaced question

SAT

37 H 3 B S

040AK2.02

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

38 F 2 M E
 041A1.01

The question is required to be enhanced to address the following:
 Question cues applicant to evaluate conditions for P-12 being met.
 Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.
 Distractors C & D have 3 bullets and A & B have 2.
 Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.
 Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

 Remove P-12 interlock from stem
 Remove 3rd bullet from choices C/D
 SAT

39 F 2 B S
 055EK3.02

40 F 2 M E
 055K3.01

The question is required to be enhanced to address the following:
 "Get Better" and "Get Worse" provide cueing to applicant as to the nature of the change in condenser pressure.
 Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

 Add PSIA to pressure
 Removw "Get Better & Get Worse"
 SAT

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

41 H 2 N U

056AG2.4.1 The question is unsatisfactory and needs to be changed to address multiple implausible distractors:

Question asks for "Immediate Operator Actions"
 A is the only option that contains ANY IOA's, making the question answerable without knowing stem. This makes the other 3 choices implausible.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Section C.2.m.2 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including options that can be judged correct or incorrect without reading the stem.

Removed "immediate operator actions" from question

SAT

42 F 2 B S

056K1.03

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

43 H 3 N E
 057AK3.01

The question is required to be enhanced to address the following:

Clarity of answer choices - answers are long and cumbersome.

Stem indicates "B Train is On Service train" , appears to be excess information in stem not required for applicant to answer question.

Distractor B lacks plausibility - having a valve opened on the "on-service" train

Question doesn't address the reason for a procedural response, it appears to addresses the reason a pump has power.

Section C.1.b. of NUREG 1021 Appendix B - The question needs to match the intent of the K/A.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Changed options to a 2X2 format
 Which pump to start - LC shedding

SAT

44 F 2 B E
 058AK1.01

The question is required to be enhanced to address the following:

Need to review wording in question - ...implications ON the aux building 125V DC system and maximum time to recharge the batteries to full power.

Reword question

SAT

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

45 F 2 M E

059A3.03

The question is required to be enhanced to address the following:

3 options are T/F statements not requiring information contained in the stem of the question.

Distractor C is a subset of distractor D.

Section C.2.m.2 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including options that can be judged correct or incorrect without reading the stem.

Section C.2.m.4 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including options that include other options.

Section C.2.c of NUREG 1021 Appendix B - Do not present a collection of true-false (T/F) statements as a multiple choice item.

Changed question to 295# and decreasing
 Changed options to a 2X2
 Pressure and time for SCP to start

SAT



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

46 H 3 M E

059AG2.4.4

The question is required to be enhanced to address the following:

SOP-50.1 sequence for securing discharge has pump secured, RCV-18 shut, then Manual discharge shut after other valve manipulations. Securing the pump or shutting RCV-18 would appear meet the requirement of IMMEDIATELY stopping the discharge. Closing a manual valve in the field seems to not be an immediate method. Need clarification on expectation of IMMEDIATELY, potential for argument of no correct answer.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Changing to a 2X2 format
Method to secure discharge x

SAT

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

47 F 2 M E

061AK2.01

The question is required to be enhanced to address the following:

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Distractors C & D have unique information not in other options. There are a total of 3 different RAD monitor combinations and 4 different ventilation combinations. This would potentially enable an individual to select the correct answer without adequate knowledge of the RMs.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Change to a 2X2 format
 Remove 3rd bullets
 Change D first part to agree W C

SAT

48 F 3 N E

061K6.01

The question is required to be enhanced to address the following:

The answer includes information not required for answering the question. The answer contains a specific determiner that is a qualifier for the answer. It includes the phrase "and possibly trip" at the end of the statement which is unnecessary to correctly answer the question.

Section C.2.m.7 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including qualifiers in the correct answer unless they are also used in the distractors.

Remove "and possibly trip" & "And there will be no speed control"

SAT

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

49 H 3 N E

062AA1.07

The question is required to be enhanced to address the following:

It is not plausible for a dropping level in the pond to cause pressure to increase in the SW system.

The second half of all options are unique. Therefore, the first half of each option is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Changed "increase" to "decrease" in C & D
Deleted "to....." statements from options

SAT

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

50 F 2 N E

062K4.01

The question is required to be enhanced to address the following:

Potential for two correct answers. Definition of minimum could be questioned - options are for different methods to accomplish same thing.

Options are not balanced.

Distractor A not plausible. Attempting to start pump is not a plausible distractor for clearing the fault on the pump.

Turning pump switch to start and releasing it is in every option.

Distractor D is not specific as to which Start Switch should be taken to start.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Changed "send operator..." to "Locally"

SAT

51 F 3 N S

062K4.03

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

52 H 3 B E

063K2.01

The question is required to be enhanced to address the following:

Options have up to 5 different elements

Options B & C reference "sequencers" and option D references "sequencer"

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Change options to a 2X2
Start location X Sequencer response

SAT

53 H 3 N E

064A1.02

The question is required to be enhanced to address the following:

TS limits are different for dipstick and EPB readings stem doesn't indicate what reading is to be used.

TS mentions 21000 gal as fuel level to declare diesel inoperable and 25000 for needing to fill. Stem needs to specify which TS min level is referenced.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Add "As read on EPB" to stem



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

54 H 3 N E

065AA2.03 The question is required to be enhanced to address the following:

The first half of all options are unique. Therefore, the second half of each option is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

- Remove "has closed to isolate leak"
- Remove second bullet
- Remove "and provides location of the leak" from stem

SAT

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

55 H 3 N E

073A2.02

The question is required to be enhanced to address the following:

The first half of all options are unique. Therefore, the second half of each option is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Change options to a 2X2 format
Valve reaction X Follow-up actions

SAT

56 H 3 N E

076A1.02

The question is required to be enhanced to address the following:

Stem indicates FCV-3009C is "Fully Opened" but opening is mechanically limited - - could cause confusion to applicants.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Stem will be clarified to "open valve to Open-Stop"

SAT

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

57 F 2 N S
076AA1.04

58 F 3 B S
076K2.08

59 H 1 N U
077AK1.01

The question is unsatisfactory and needs to be changed to address the following:

Taking voltage switch to lower then asking what voltage will do cues applicant to correct answer and makes 2 distractors implausible.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Focus stem and remove operator action.

Change options to 2X2

Operator will change Voltage in which direction X How will Amps respond

SAT

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

60 H 3 B E

078K1.03

The question is required to be enhanced to address the following:

Distractor A not credible with "Pressure will rise until" given in the stem.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

- Remove "Pressure will rise until statement from stem
- Change distractors
- Add the reactor will trip on high PZR level
- The pZR will go solid
- Remove Code safety's will lift
- Reword PORV opening.

SAT

61 H 3 N S

103G2.4.4

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

62 H 4 B E

WE03EK1.2 The question is required to be enhanced to address the following:

Option D gives "how" SI will be reduced while other options give "why"

Question appears to require detailed knowledge of ESP - 1.2 procedure for a specific set of circumstances. Potentially SRO knowledge.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Knowledge of soak requirements is required RO knowledge at Farley

Remove "by securing HHSI" from D

SAT

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

63 F 3 N U

WE08EK1.2

The question is unsatisfactory and needs to be changed to address the following:

Need time from accident start to establish the >100F in one hour for soak requirement

Action to be performed during soak not RO knowledge

Holding temp constant is in all distractors

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Change options to a 2X2 format
Cooldown X Depressurization requirements

SAT

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

64 H 3 N U

WE11EA1.2 The question is unsatisfactory and needs to be changed to address the following:

Question used backward logic to ask question.

Pictures are nice but not viewed as necessary.

Section C.1.h. of NUREG 1021 Appendix B - Avoid "backward logic" questions that ask for what should be provided in the question and provide what should be required in the examinee's response.

 Remove 2 pictures - leave one picture unlabeled as to which valve it corresponds
 Add - Amber light lit for RHR pump description
 Reference picture for valve corresponded to in option
 Change question wording to be a positive question

SAT

65 H 2 N S

WE15EA2.1 Procedural transitions are SRO LOK normally but indicated that for this procedure it is a requirement of the RO to know how to step through procedure and that transition out would be inappropriate.

 Procedure flowpath and exit criteria is RO LOK at Farley for this procedure

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

66 H 2 N E

G2.1.17

The question is required to be enhanced to address the following:

Distractor C is not plausible.

Does the SM "call for" or "provide" an update?

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Change option C to Thunderstorm warnings have been issued for the area.
Actually changed to STA Announced he is stationed in CR

SAT

67 F 2 B E

G2.1.21

The question is recommended to be enhanced to address the following:

Separate conditions in the stem from the question.

Option A is a subset of Option C.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Reformat stem
Remove last sentence in C.

SAT

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

68 F 2 B E

G2.1.36 The question is recommended to be enhanced to address the following:

Remove "but" from distractor A.

Reword distractor D to be a direct statement like the other options.

Remove But from A

Reword distractor D

SAT

69 F 3 B E

G2.2.13 The question is required to be enhanced to address the following:

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors. Options C & D have qualifying statements in the second half not contained in A & B and not required to correctly answer the question.

The second half of all options are unique. Therefore, the first half of each option is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Change to a 2X2 format

Can position be changed X Status of system/component

Changed "equipment to either system/component

SAT

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

70 F 3 N E

G2.2.17

The question is required to be enhanced to address the following:

The first and second halves of all options are unique. Therefore, only one of 12 pieces of information is required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Options include information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

White status added to stem
Remove reference to NRC PI
Use only 4 individual components

71 F 3 B U

G2.3.13

The question is unsatisfactory and needs to be changed to address the following:

Distractors C & D are not plausible. Staying in area is not plausible with alarm.

Verify not basic radworked knowledge.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Replaced question

SAT

72 F 3 N S

G2.3.4

The question is recommended to be enhanced to address the following:

Movement should be capitalized in stem.

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

73 F 2 M E
 G2.4.26 The question is required to be enhanced to address the following:

Security on hose support not plausible.

Fire Marshal - -only one - not plausible for shift Fire Brigade make-up

The first half of all options are unique. Therefore, the other information in the options is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Removed tanker from question
 Changed to a 2X2 format
 Personnel support X Agent type

SAT

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

74 H 1 B U

G2.4.28

This question may need to be withheld from ADAMS - need to discuss licensee expectations for disposition of exam hard copies and control of information in the event of appeal.

The question is unsatisfactory and needs to be changed to address the following:

Distractor Analysis states "only Unit 1 is affected so far" but stem indicates all service water is lost to both units.

Potential for 2 correct answers - use of AOP-10 would be applicable as well as AOP-49.

Question doesn't specifically ask for actions IAW AOP-49.

Option assumes 1B DG is running and not specified in stem.

Options include information not required for answering the question. Additional information could be used to eliminate distractors.

Complete loss of SW to both units would also require a dual unit trip - knowledge of unit security procedure not required to select correct answer.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible but provide all necessary information.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Section C.2.m.4 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, an option that includes another option.

- Change to a 2X2 format
- RX Trip X EDG actions
- Remove excess information
- Add 1B EDG supplying buss to stem

SAT

75 F 2 M S

G2.4.5

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

76 H 3 N E

008AG2.1.3

The question is required to be enhanced to address the following:

Distractors/Answer includes information not required for answering the question. Additional information cues applicant regarding content of procedure, which is required knowledge.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Remove "since....." from options
Reworded option to focus information

77 H 3 N E

011EA2.10

The question is required to be enhanced to address distractor plausibility:

Distractor D specifies to "maintain" Core exit T/C's falling, when the stem indicates they are "stable". Suggest using a term to indicate a change in current condition. (e.g. "establish")

Section C.2.m.1 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including distractors that do not follow grammatically from the stem.

Change "maintain" to "establish"

SAT

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

78 H 4 N E
 012G2.4.2 The question is required to be enhanced to address question clarity:

Question states it is asking for 3 knowledge aspects;
 1 - System Operation
 2 - TS Applicability
 3 - TS Basis

Knowledge of system operation and TS applicability are not interrelated. TS applicability is tied to system operation in distractors/answer. Direct tie between information pieces cues applicant regarding the other.

TSB is unique for each answer. Question is only testing information on TS 3.3.1 applicability below 8%.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.1.f. of NUREG 1021 Appendix B – Limit question to one concept or topic, unless synthesis of concepts is being tested.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

 Change stem initial conditions
 Changed to a 2X2 format
 Action X Basis

79 H 3 N S
 025AA2.02

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

80 H 2 N U

028A2.01

The question is unsatisfactory and is required to be changed to address:

Non-discriminatory level of knowledge required to correctly answer question.
(Distinguishing between 3.4% and 3.9% for starting recombiners is not a discriminating piece of knowledge and potentially a systems knowledge requirement.)

SRO-Only knowledge is not required to correctly answer question. (Neither the knowledge of the starting limit or reading of the graph meet the requirements to be considered discriminating for an SRO applicant)

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job. (Not trivial in nature)

Section C.1.e. of NUREG 1021 Appendix B - Avoid questions that are unnecessarily difficult or irrelevant.

Replaced KA W 016G2.2.40

SAT

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

81 H 3 N E

028AG2.1.7 The question is required to be enhanced to address the following:

Clarity of distractors - the word "for" should be inserted between "channel" and "up" in distractors B & C.

Cueing in the stem - indicating the TS evaluations that are in progress is expected SRO knowledge and not required to answer the question.

Distractor analysis should indicate that question is SRO Only because application of generic LCO requirements, including 3.0.3, is SRO Only knowledge. NOT because instrument failure is more than 1 hours action statement.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Added "for" to options as necessary
Remove TS from stem

SAT

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

82 H 3 N E

039G2.4.1

The question is required to be enhanced to address the following:

Distractor B is not a credible distractor with no indications that SI may be required.

Answer D is significantly longer than the distractors.

Distractor analysis indicates "as long as 2 operators are present to allow one operator to complete immediate actions" - reference needed to support specific requirement and remove potential ambiguity.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Section C.2.m.6 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including the correct answer being longer than the distractors.

Focused stem
 Reworded options for clarity and removed unnecessary information
 Changed to a 2X2 format
 Trip vs SD X IA's VS shut MSIV's

SAT

83 H 3 N E

055G2.1.19

The question is required to be enhanced to address the following:

Distractors/Answer includes information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Remove "When...." from C & D

SAT

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

84 H 3 N E

056AG2.2.4 The question is suggested to be enhanced to improve question clarity:

As worded the question uses TS 3.8.1 in the stem and in only 2 of the distractors. Potentially incorrectly suggests that 3.8.1 is not applicable and therefore NOT entered at all. Suggest rewording question without referencing TS 3.8.1 in stem.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Remove TS reference from stem

SAT

85 F 2 N E

062G2.2.36 The question is suggested to be enhanced to improve question clarity:

Question statement "At 1000 prior to any maintenance or further actions:" might cause confusion if it means prior to or after bypass switch manipulation. Suggest clarifying that the question is referencing after the inverter is in bypass.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Changed reference time in question to 1002

SAT

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

86 H 3 N E

063A2.02

The question is required to be enhanced to address the following:

Distractors/Answer includes information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

Question contains the term "potential" which allows for the potential of 2 correct answers. The question needs to be focused to ensure there is only 1 correct answer.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Change to a 2X2 format
Remove from equalization X Ventillation requirements

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

87 H 3 N E

065AA2.06

The question is required to be enhanced to address the following:

Consideration of PORV not operable after Back-up Nitrogen in lined up is not a credible distractor.

Without written definition of critical valves, it is not clear that the requirement to trip would be met at 1002 and therefore possibly having 2 correct answers. The question needs to be focused to ensure there is only 1 correct answer.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.m.5 of NUREG 1021 Appendix B - Specific determiners that give cues as to the correct answer should be avoided, including implausible distractors.

Changed time to 1016
removed "and backup....." from question
Critical valves listed

SAT

88 F 3 N S

068AA2.02

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

89 H 1 N U

071G2.1.20 The question is unsatisfactory and is required to be changed to address:

Question is direct look up, except for knowledge that monitors are always NON-Operable.

NON- Discriminatory level of knowledge required for SRO applicant.

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Replaced KA 033A2.01

SAT

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

90 H 1 N U

076AG2.1.3

The question is unsatisfactory and is required to be changed to address:

Question is direct look up with the references given.

NON- Discriminatory level of knowledge required for SRO applicant.

Question asks for longest power operation, but some answer options also address restoration of DEI.

First part of each answer is unique - second part only decreases discriminatory value / plausibility

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.1.f. of NUREG 1021 Appendix B – Limit question to one concept or topic, unless synthesis of concepts is being tested.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Change to a 2X2 format
Delete B&D

SAT

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

91 F 3 B E

103A2.02

The question is required to be enhanced to address the following:

Distractors/Answer includes information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors.

RO LOK can be used to eliminate all distractors. A & C can be eliminated due to not mentioning closing an airlock door. The "must" in the stem of the question allows the elimination of B due to equipment hatch is not "required" to be bolted.

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Change question statement
 Changed to 2X2 format
 FHS location requirement X What hatch closed (equipment or airlock)

SAT

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

92 H 2 N E

we04EG2.1. The question is required to be enhanced to address the following:

Question asks "which procedure will provide mitigating strategies when the leak is isolated"? Is the intention to ask which procedure will the crew go to following ECP-1.2?

The first and second part of each answer option is unique. If the applicant knows a single piece of information, the rest is redundant.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Change to a 2X2 format
Parameter change X Procedure selection

SAT

93 H 4 N E

WE10EA2.1 The question is required to be enhanced to address the following:

Distractors/Answer includes information not required for answering the question. Additional information could be used by unknowledgeable applicant to eliminate distractors. Transitions to UOP in Distractors A&B is unnecessary to answer question. "When directed to by ESP- 0.2" is redundant in distractors C&D

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

Remove UOP 2.2 and ESP 2.2 from stem and options

SAT

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

94 F 1 N U

G2.1.3

The question is unsatisfactory and is required to be changed to address:

Fire brigade leader in stem is not relevant to the question

SSS Plant is correct in all the distractors/answer

Question can be clarified to ask question more simply

Inadequate operational relevance of SS maintaining all responsibility while out of control room.

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.1.e. of NUREG 1021 Appendix B - Avoid questions that are unnecessarily difficult or irrelevant.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Reworded stem
 Changed distractors

SAT



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

95 H 2 N U

G2.2.1

The question is unsatisfactory and is required to be changed to address:

As stated in the distractor analysis, the first part of each question can be answered using system knowledge which is RO knowledge. Changing reactivity by one method at a time is a general precaution of UOP 1.1 P&L 3.4.2, which is RO Knowledge.

Question does not meet requirements for SRO Only knowledge.

Question construction places an unnecessary reading burden on applicants.

Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers

Change to a 2X2 format
Change second half to brief requirements

SAT

96 F 2 N E

G2.2.36

The question is suggested to be enhanced to improve question clarity:

Distractor C states - "since it was not time stroked" - possible change to "since is has not been time stroked" to maintain consistency with B & D.

Changed distractor

SAT

97 H 3 N S

G2.3.12

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
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only		

98 F 3 B S
G2.3.6

99 H 3 N E
G2.4.35

The question is required to be enhanced to address the following:

The first half of all options are unique. Therefore, the second half of each option is not required to correctly answer the question and decreases the discriminatory value of the question by increasing the opportunity to eliminate distractors.

Distractor B is the only one that does not address the procedure for establishing FW to a CCP. This procedure is identified in the stem and used in all the other distractors/answer. A, C, & D have effects of lining up FW and B has a requirement to reestablish cooling.

Potential 2 correct answers - AOP-09 does not appear to prohibit establishing FW to running pump. This would make C also a correct answer.

Section C.2.d. of NUREG 1021 Appendix B - Include as much information as possible about the problem or situation in the stem. Leaving only the solution, action, or effect for the answer options.

Section C.1.f. of NUREG 1021 Appendix B – Limit question to one concept or topic, unless synthesis of concepts is being tested.

Section C.2.f of NUREG 1021 Appendix B - Provide sufficient counterbalance in questions with multi-part answers.

- Remove reason in second part of options
- Shorten answers
- Reword question.

SAT

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

100 F 2 N E

G2.4.38

The question is unsatisfactory and is required to be changed to address:

Who can approve exposure limits in excess of 10CFR Requirements or above site administrative limits is not discriminating knowledge for an SRO applicant.

Q asks for SM's responsibility in beginning but no reference to SM in any answers.

Stem is unclear as to if the 5500MR is for each person or for the entire team. Assumption either way changes answer to the question.

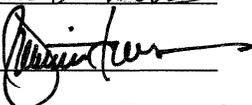
Section C.1.a. of NUREG 1021 Appendix B - The concept being measured needs to have a direct, important relationship to the ability to perform the job.

Section C.1.c. of NUREG 1021 Appendix B - The question needs to be stated unambiguously, precisely, and as concisely as possible.

Focus stem

Change question to ask for responsible approval authority.

SAT

Facility: Farley		Date of Exam: 11/10/08		Exam Level: RO and SRO	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	CRK	N/A	MB		
2. Answer key changes and question deletions justified and documented	CRK	N/A	MB		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	CRK	N/A	MB		
4. Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail	CRK	N/A	MB		
5. All other failing examinations checked to ensure that grades are justified	CRK	N/A	MB		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	CRK	N/A	MB		
Printed Name/Signature			Date		
a. Grader				12/18/08	
b. Facility Reviewer(*)	N/A			N/A	
c. NRC Chief Examiner (*)	MARK A. BATES / 			12/18/08	
d. NRC Supervisor (*)	MALCOLM T. WIDEMAN / 			12/11/08	
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					