

HARRIS 2008-301

MARCH-2008

ADMINISTRATIVE DOCUMENTS

(Yellow Paper)

- ~~1.~~ Exam Preparation Checklist ES-201-1
- ~~2.~~ Exam Outline Quality Checklist ES-201-2 ✓
- ~~3.~~ Exam Security Agreement(s) ES-201-3 ✓
- ~~4.~~ Administrative Topics Outline (Final) ES-301-1 ✓
- ~~5.~~ Control Room Systems & Facility Walk-through Test Outline
(Final) ES-301-2 ✓
- ~~6.~~ Operating Test Quality Check Sheet ES-301-3 ✓
- ~~7.~~ Simulator Scenario Quality Check Sheet ES-301-4 ✓
- ~~8.~~ Transient and Event Checklist ES-301-5 ✓
- ~~9.~~ Competencies Checklist ES-301-6 ✓
- ~~10.~~ Written Exam Quality Check Sheet ES-401-6 ✓
- ~~11.~~ Written Exam Review Worksheet ES-401-9
- ~~12.~~ Written Exam Grading Quality Checklist ES-403-1 ✓
- ~~13.~~ Post-Exam Check Sheet ES-501-1
- ~~14.~~ Facility Submittal Letters 1-4-2008 [✓]
11-30-2007

Facility: Harris 2008-301 Dates of Examination: 3/10-14 and XX/2008
 Examination Prepared By: Facility: NRC ^{03/20/2008}
 Written / Operating Test Written / Operating Test

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	8/2007
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	10/XX/2008
-120	3. Facility contact briefed on security and other requirements (C.2.c)	10/XX/2008
-120	4. Corporate notification letter sent (C.2.d)	10/XX/2008
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	01/07/2008
{-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)	12/17/2007
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	01/09/2008
{-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 reference materials due (C.1.e, f, g and h; C.3.d)	01/07/2008
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	02/08/2008
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	02/25/2008
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	2/15/2008
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	2/15/2008 & 3/10/2008
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	03/05/2008 * 3/20/2008
-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 4; ES-202, C.2.e; ES-204)	3/16/2008 D. Dancyel 3/13/2008
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	3/14/2008
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	3/10/2008

* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.
 [Applies only] {Does not apply} to examinations prepared by the NRC.

Facility:	Harris	Date of Examination:	3/10/2008		
Item	Task Description	Initials			c#
		a	b*		
W R I T T E N	1. a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	JD	AS	AS	
	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.	JD	AS	AS	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	JD	AS	AS	
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	JD	AS	AS	
S I M U L A T O R	2. 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.	JD	AS	AS	
	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 scenarios will not be repeated on subsequent days.	JD	AS	AS	
	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.	JD	AS	AS	
W / T	3. a. Verify that 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 alternate path, low-power, emergency and RCA tasks meet the criteria on the form.	JD	AS	AS	
	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	JD	AS	AS	
	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.	JD	AS	AS	
G E N E R A L	4. a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	JD	AS	AS	
	b. Assess whether the 10CFR 55.41/43 and 55.45 sampling is appropriate.	JD	AS	AS	
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	JD	AS	AS	
	d. Check for duplication and overlap among exam sections.	JD	AS	AS	
	e. Check the entire exam for balance of coverage.	JD	AS	AS	
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	JD	AS	AS	
		Printed Name / Signature		Date	
a. Author	John Dalton / <i>[Signature]</i>			2/26/08	
b. Facility Reviewer (*)	Artie Sylvester for G. Kidpatrick / <i>[Signature]</i>			2-27-08	
c. NRC Chief Examiner (#)	GERARD W. LASKA / <i>[Signature]</i>			3/4/2008	
d. NRC Supervisor	NACOLM T. WIDMANN / <i>[Signature]</i>			03/05/08	
NOTE: # Independent NRC reviewer initial items in Column "c", chief examiner concurrence required.					

Facility:		Harris	Date of Examination:		3/10/2008		
Item	Task Description	Initials			a	b*	c#
WRITEN	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	JO	AS	JS			
	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.	JO	AS	JS			
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	JO	AS	JS			
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	JO	AS	JS			
SIMULATED	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.	JO	AS	JS			
	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 scenarios will not be repeated on subsequent days.	JO	AS	JS			
	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.	JO	AS	JS			
W/T	a. Verify that 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 alternate path, low-power, emergency and RCA tasks meet the criteria on the form.	JO	AS	JS			
	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	JO	AS	JS			
	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.	JO	AS	JS			
	d. 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.	JO	AS	JS			
GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	JO	AS	JS			
	b. Assess whether the 10CFR 55.41/43 and 55.45 sampling is appropriate.	JO	AS	JS			
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	JO	AS	JS			
	d. Check for duplication and overlap among exam sections.	JO	AS	JS			
	e. Check the entire exam for balance of coverage.	JO	AS	JS			
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	JO	AS	JS			
		Printed Name / Signature				Date	
a. Author	JOHN DALTON / <i>[Signature]</i>				12/3/07		
b. Facility Reviewer (*)	W. Arthur Sylvester / <i>[Signature]</i>				12-3-07		
c. NRC Chief Examiner (#)	GERARD W. LASEK / <i>[Signature]</i>				12-11-07		
d. NRC Supervisor							

NOTE: # Independent NRC reviewer initial items in Column "c", chief examiner concurrence required.

DRAFT

From: Mark Bates
To: Gerard Laska
Date: 12/11/2007 2:42:30 PM
Subject: Re: Harris Outline comments

Per our discussion on the phone, you may sign for me per telecon. I have read your comments and agree that they are satisfactory for sending to the licensee.

Mark A. Bates
Senior Operations Engineer
US NRC - Region II
Operations Branch
404-562-4612

>>> Gerard Laska 12/11/2007 2:32 PM >>>

Mark/Malcolm, attached are my comments on the outlines that Harris submitted. Overall they appear to be acceptable. I have several questions that I am going to ask regarding method of development of the original outline, and selection of replacement K/As. I will call J. Dalton this afternoon with this information. Thanks, Gerry.

Gerry Laska
Senior Operations Examiner
404-562-4626

2008 Initial ³⁻¹⁸⁻⁰⁸ NRC written

ATTACHMENT 3

HARRIS PLANT 115
2008 ILC EXAM
SECURITY AGREEMENT

EXAMINATION SECURITY AGREEMENT

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the period indicated below 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. Furthermore, I am aware of the physical security measures and requirements 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 period indicated below. 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.

Examination Period 11/13/07 to 3/12/08 ~~3/21/08~~
_{3/24/08}

PRINTED NAME	JOB TITLE / RESPONSIBILITY	PRE-EXAMINATION SIGNATURE (1)	DATE	POST-EXAMINATION SIGNATURE (2)	DATE	NOTE
1. JOHN DALTON	EXAM LEAD / SNOET		11/13/07		3/24/08	
2. Mark Christopherson	CRS		11/13/07		3/24/08	
3. W. A. Sylvester	LWOTI / Reviewer		11-27-07		3/24/08	
4. Ron Bright	Scm Support		11/30/07		3/24/08	
5. Mark Kovalis	App-NTT		11/30/07		4/15/08	
6. MCDONALD, D. D.	Scm Support		12/31/07		3/24/08	
7. Cherie L Griffith	RD		12/17/07		3-31-08	
8. Michael J. Conchesne	SFA		12-17-07		4-8-08	
9. Richard Vandenberg	SRO		12-17-07		4/14/08	
10. Chris S. Allen	Scm NIT Analyst		12/19/07		4/19/08	
11. Matthew S Leach	RD		12/27/07		3-26-08	
12. Randall D Embree	SRO		12-27-07		3-26-08	
13. Michael J. Spellman	SRO		1-2-08		4-5-08	
14. RICK WAYMAN	SRO		1-3-08		4-3-08	

NOTES:

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Examination Period 11/13/07 to 3/21/08

PRINTED NAME	JOB TITLE / RESPONSIBILITY	PRE-EXAMINATION SIGNATURE (1)	DATE	POST-EXAMINATION SIGNATURE (2)	DATE	NOTE
1. Randal Atkins	RO	<i>Randal Atkins</i>	1/7/08	<i>Randal Atkins</i>	4/14/08	
2. John Wiggins	Telecom	<i>John Wiggins</i>	1/7/08	<i>John Wiggins</i>	4/14/08	Ⓛ
3. Keith Butler	USCO/STA	<i>Keith Butler</i>	1/10/08	<i>Keith Butler</i>	4-15-08	
4. Tom Bottoms	RO	<i>Tom Bottoms</i>	1-10-08	<i>Tom Bottoms</i>	4-15-08	
5. Don MacDougal	SCO	<i>Don MacDougal</i>	1/14/08	<i>Don MacDougal</i>	4/8/08	
6. Shawn Stanton	RO	<i>Shawn Stanton</i>	1-14-08	<i>Shawn Stanton</i>	3-24-08	
7. Teresa Midgette	Nuc Tech Asst I	<i>Teresa Midgette</i>	1/17/08	<i>Teresa Midgette</i>	3-24-08	
8. Dave Corlett	Licensing Supervisor	<i>Dave Corlett</i>	1/17/08	<i>Dave Corlett</i>	4/9/08	
9. Wanda <i>Wanda</i>	MSO <i>MSO</i>	<i>Wanda</i>	1/18/08	<i>Wanda</i>	3-21-08	
10. Chris Burton	DSO	<i>Chris Burton</i>	1/22/08	<i>Chris Burton</i>	4/8/08	
11. William D. Gunter	SSO	<i>William D. Gunter</i>	2/4/08	<i>William D. Gunter</i>	3/24/08	
12. Rodney Teashey	CRS	<i>Rodney Teashey</i>	2/11/08	<i>Rodney Teashey</i>	4/13/08	
13. Trent Plummer	RO	<i>Trent Plummer</i>	2-28-08	<i>Trent Plummer</i>	4-3-08	
14. Vince Parente	RO	<i>Vince Parente</i>	2-28-08	<i>Vince Parente</i>	4/14/08	

NOTES: Ⓛ TELECOM SPECIALIST, SIGNED OFF VIA PHONE.

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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 period indicated below. 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.

Examination Period 11/13/07 to 3/21/08

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	PRE-EXAMINATION SIGNATURE (1)	DATE	POST-EXAMINATION SIGNATURE (2)	DATE	NOTE
1.	<u>Rob Winkler</u>	<u>SLO</u>	<u>[Signature]</u>	<u>3-5-08</u>	<u>[Signature]</u>	<u>4-3-08</u>	
2.	<u>Matt Fulks</u>	<u>SRO</u>	<u>[Signature]</u>	<u>3/6/08</u>	<u>[Signature]</u>	<u>3/26/08</u>	
3.	<u>SCOTT SCOTT</u>	<u>SRO</u>	<u>[Signature]</u>	<u>3/10/08</u>	<u>[Signature]</u>	<u>4-8-08</u>	
4.	<u>TOM CRAIG</u>	<u>Sr. Inst</u>	<u>[Signature]</u>	<u>3/10/08</u>	<u>[Signature]</u>	<u>4/1/08</u>	
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NOTES:

ATTACHMENT 3

EXAMINATION SECURITY AGREEMENT

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Examination Period 11/13/07 to 3/21/08

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	PRE-EXAMINATION SIGNATURE (1)	DATE	POST-EXAMINATION SIGNATURE (2)	DATE	NOTE
1.	<u>Mr Bostic</u>	<u>NRO</u>	<u>[Signature]</u>	<u>3/12/08</u>	<u>[Signature]</u>	<u>4/15/08</u>	
2.	<u>Sue Manly</u>	<u>DMA</u>	<u>[Signature]</u>	<u>3/12/08</u>	<u>[Signature]</u>	<u>4/8/08</u>	
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NOTES:

EXAMINATION SECURITY AGREEMENT

1. Pre-Examination

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Examination Period 11/13/07 to 3/21/08

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	PRE-EXAMINATION SIGNATURE (1)	DATE	POST-EXAMINATION SIGNATURE (2)	DATE	NOTE
1.	Karla Butner	STA / Exam Validation	[Signature]	3/18/08	ALREADY SIGNED ON		
2.	Tom Bottoms	CD / Exam Validation	[Signature]	3-18-08	ALREADY SIGNED ON		
3.	Larry Taylor	SC/STA / Exam Validation	[Signature]	3-19-08	[Signature]	4-3-08	
4.	Floyd Lawrence	CK3 Instructor / Peer Review	[Signature]	3-20-08	[Signature]	4/1/08	Ⓟ
5.	Clarence Matthews	375 HNP / SNOIT	[Signature]	3/20/08	[Signature]	3/24/08	
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NOTES: Ⓟ Signed off per Telcom.

Facility: HARRIS	Date of Examination: March, 2008	
Examination Level (circle one): RO / SRO	Operating Test Number: NRC	
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M	Determine the cold, xenon free boron concentration requirement prior to commencing a natural circulation cooldown. (EPP-005/OST-1036) G2.1.25 (2.8/3.1) – Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.
Conduct of Operations	M	Estimate Primary to Secondary Leak Rate. (AOP-016, Curve Book) 2.1.25 (2.8) – Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.
Equipment Control	M	Perform a Quadrant Power Tilt Ratio (QPTR) calculation with a control rod misaligned. (OST-1039) 2.2.12 (3.0) – Knowledge of surveillance procedures.
Radiation Control	M	Given an emergency situation, determine the applicable dose limit and the number of people that will be required to perform the task, with no one exceeding the limit. 2.3.4 (2.5/3.1) – Knowledge of radiation exposure limits and contamination control, including permissible limits in excess of those authorized.
Emergency Plan		NOT SELECTED FOR RO
NOTE: All items (5 total are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.		
*Type Codes & Criteria: (C)ontrol room (D)irect from bank (≤ 3 for ROs; \leq for SROs & RO retakes) (N)ew or (M)odified from bank (> 1) (P)revious 2 exams (≤ 1 ; randomly selected) (S)imulator		

Facility: HARRIS		Date of Examination: March, 2008
Examination Level (circle one): RO / SRO		Operating Test Number: NRC
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M	Determine the cold, xenon free RCS boron concentration requirement prior to commencing a natural circulation cooldown. (EPP-005/OST-1036) G2.1.25 (2.8/3.1) – Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.
Conduct of Operations	P, M	Perform a Control Room Supervisor review of the control board readings log. (OST-1021, Attachment 4) G2.1.18 (3.0) – Ability to make accurate, clear and concise logs, records, status boards, and reports.
Equipment Control	N	Review the completed surveillance for Motor Driven AFW Pump “A”. (OST-1211) 2.2.12 (3.4) – Knowledge of surveillance procedures.
Radiation Control	M	Given an emergency situation, determine the applicable dose limit and the number of people that will be required to perform the task, with no one exceeding the limit. 2.3.4 (2.5/3.1) – Knowledge of radiation exposure limits and contamination control, including permissible limits in excess of those authorized.
Emergency Plan	M	Evaluate a change in conditions with an EAL in effect and take the required actions. 2.2.41(4.1) – Knowledge of the emergency action level thresholds and classifications.
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.		
*Type Codes & Criteria: (C)ontrol room (D)irect from bank (≤ 3 for ROs; \leq for SROs & RO retakes) (N)ew or (M)odified from bank (> 1) (P)revious 2 exams (≤ 1 ; randomly selected) (S)imulator		

Facility:	HARRIS	Date of Examination:	3/2008
Exam Level (circle one):	RO / SRO(I) / SRO (U)	Operating Test No.:	NRC
Control Room Systems [®] (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U, including 1 ESF)			
	System / JPM Title	Type Code*	Safety Function
a.	Initiate Emergency Boration following a reactor trip (AOP-002) System: 004/Bank JPM CR-037	M, A, S	1
b.	Align ECCS for long-term recirculation (EPP-010) System: EPE011/Bank JPM CR-031	M, A, S	3
c.	Initiate RCS Feed and Bleed (FRP-H.1) System: E05/2007 NRC Exam JPM d	P, D, A, S	4P
d.	Respond to a loss of Normal Service Water (AOP-022) System: 076	N, A, S	4S
e.	Place the Containment Hydrogen Purge System in operation (OP-125) RO Only System: 028/Bank JPM CR-021	D, C	5
f.	Transfer an Emergency Bus to an EDG due to a degraded grid condition (AOP-028, Attachment 2) System: 062	N, A, S	6
g.	Respond to a Fuel Handling Building RMS alarm (AOP-005, OP-170) System: 072	N, L, S	7
h.	Align CCW to support RHR Initiation (OP-145) System: 008/Bank JPM CR-085	D, L, S	8
In-Plant Systems [®] (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i.	Perform the local actions for a dropped rod recovery (AOP-001) System: 001/Bank JPM IP-153	D, E	1

j.	Isolate the ECCS Accumulators after a control room evacuation (AOP-004, Step 38) System: APE068	N, E	8
k.	Terminate a Waste Gas Release (OP-120.07) System: 071/2007 NRC JPM k	P, D, R	9
@	All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.		
* Type Codes		Criteria for RO / SRO-I / SRO-U	
(A)lternate path		4-6 / 4-6 / 2-3	
(C)ontrol room			
(D)irect from bank		$\leq 9 / \leq 8 / \leq 4$	
(E)mergency or abnormal in-plant		$\geq 1 / \geq 1 / \geq 1$	
(L)ow-Power / Shutdown		$\geq 1 / \geq 1 / \geq 1$	
(N)ew or (M)odified from bank including 1(A)		$\geq 2 / \geq 2 / \geq 1$	
(P)revious 2 exams		$\leq 3 / \leq 3 / \leq 2$ (randomly selected)	
(R)CA		$\geq 1 / \geq 1 / \geq 1$	
(S)imulator			

HARRIS 2008 NRC 301-2 JPM SUMMARY STATEMENTS

- Initiate Emergency Boration in accordance with AOP-002, EMERGENCY BORATION, following a reactor trip. The alternate path is to take corrective action for two or more stuck rods as determined in EPP-004, REACTOR TRIP. Modified from Bank JPM CR-037 by failing first boration path driving candidate to use secondary means.
- Transfer to Cold Leg Recirculation in accordance with EPP-010, TRANSFER TO COLD LEG RECIRCULATION, following a LBLOCA. The alternate paths are corrective actions for alignment failures in two different flowpaths. Modify Bank JPM CR-031 by changing the misaligned valve in one RNO step and the running pump combination.
- Initiate RCS Feed and Bleed IAW FRP-H.1, RESPONSE TO LOSS OF SECONDARY HEAT SINK. The alternate path is to establish an adequate vent path using RV Head Vents following failure of one PORV to open. Randomly selected repeat from 2007 NRC Exam (JPM d) not in the facility bank.
- Respond to a loss of the only available Normal Service Water Pump in accordance with AOP-022, LOSS OF SERVICE WATER. The alternate path is to start one Essential Service Water Pump and to trip the Main Turbine with power less than P-10. New JPM.
- Place the Containment Hydrogen Purge System in operation in accordance with OP-125, POST ACCIDENT HYDROGEN SYSTEM. Bank JPM CR-021. This JPM will be simulated in the Main Control Room (using cues) because some equipment important to the task is not simulated.

- f. With a degraded grid condition, transfer an emergency bus to an EDG in accordance with AOP-028, GRID INSTABILITY – Attachment 2, ENERGIZING EMERGENCY BUSES FROM EDGS, by purposely de-energizing a bus. The alternate path is starting an EDG following evaluation of Voltage/Frequency on an emergency bus and manually resetting the Load Sequencer after the cycle is complete. New JPM.
- g. Respond to a Fuel Handling Building RMS alarm in accordance with AOP-005, RADIATION MONITORING SYSTEM, and OP-170, FUEL HANDLING BUILDING HVAC. A FHB monitor alarms and FHB HVAC components fail to align properly. New JPM.
- h. Align CCW to support RHR Initiation in accordance with OP-145, COMPONENT COOLING WATER. Bank JPM CR-085.
- i. Perform the local actions for a dropped rod recovery in accordance with AOP-001, MALFUNCTION OF ROD CONTROL AND INDICATION SYSTEM. Bank JPM-IP-153.
- j. Isolate the ECCS Accumulators after a control room evacuation in accordance with AOP-004, REMOTE SHUTDOWN, Step 38. New JPM.
- k. Terminate a Waste Gas Release in accordance with OP-120.07, WASTE GAS PROCESSING. Randomly selected repeat from 2007 NRC Exam (JPM k).

Facility:	Date of Examination:	Operating Test Number:		
1. General Criteria		Initials		
		a	b*	c#
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	JO	Dek	JH
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JO	Dek	JH
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	JO	Dek	JH
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	JO	Dek	JH
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JO	Dek	JH
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 	JO	Dek	JH
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.	JO	Dek	JH
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.		JO	Dek	JH
	Printed Name / Signature	Date		
a.	Author <u>JOHN DALTON / [Signature]</u>	<u>1/4/08</u>		
b.	Facility Reviewer(*) <u>GREG KIPATRICK / [Signature]</u>	<u>05 Jan 08</u>		
c.	NRC Chief Examiner (#) <u>GERARD W. LISKA / [Signature]</u>	<u>3/5/2008</u>		
d.	NRC Supervisor <u>MALCOLM T. WIDMANN / [Signature]</u>	<u>02/05/08</u>		
NOTE:	* The facility signature is not applicable for NRC-developed tests.			
	# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.			

Facility: HARRIS		Date of Exam: 03/2008	Scenario Numbers: 1/2/3	Operating Test No.:		
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.	PO	AS	AS		
2.	The scenarios consist mostly of related events.	PO	AS	AS		
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) 	PO	AS	AS		
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.	PO	AS	AS		
5.	The events are valid with regard to physics and thermodynamics.	PO	AS	AS		
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	PO	AS	AS		
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.	PO	AS	AS		
8.	The simulator modeling is not altered.	PO	AS	AS		
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.	PO	AS	AS		
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.	PO	AS	AS		
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	PO	AS	AS		
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).	PO	AS	AS		
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	PO	AS	AS		
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes				
1.	Total malfunctions (5-8)	9 / 8 / 78				
2.	Malfunctions after EOP entry (1-2)	2 / 2 / 2				
3.	Abnormal events (2-4)	4 / 5 / 4				
4.	Major transients (1-2)	2 / 2 / 1				
5.	EOPs entered/requiring substantive actions (1-2)	2 / 2 / 3				
6.	EOP contingencies requiring substantive actions (0-2)	1 / 1 / 0				
7.	Critical tasks (2-3)	2 / 3 / 32				

Facility:		HARRIS		Date of Exam:		03/2008		Operating Test No.:		SROU/I							
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 M ^(*) R I U			
		1			2			3			4						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C					B O P
SRO-U	RX													1	1	0	
	NOR	1			1									1/2	1	1	
	I/C	3,4, 5,6			2,3, 4,5, 6									4/6	4	4	
	MAJ	7,9			7,9									2/4	2	2	
	TS	2,3			3,5, 6									2/2	0	2	
SRO-I	RX					1								1	1	1	
	NOR	1												1	1	1	
	I/C	3,4, 5,6				2,4, 6								7	4	4	
	MAJ	7,9				7,9								4	2	2	
	TS	2,3												3	0	2	
	RX														1	1	
	NOR														1	1	
	I/C														4	4	
	MAJ														2	2	
	TS														0	2	

Instructions:

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

Facility:		HARRIS		Date of Exam:		03/2008		Operating Test No.:		RO						
A P P L I C A N T	E V E N T T Y P E	Scenarios														
		1			2			3			4			T O T A L	M I N I M U M (*) R U	
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION					
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P			
RO1	RX		1										1	1	1	0
	NOR						1						1	1	1	1
	I/C		3,5				3,5						4	4	4	2
	MAJ		7-9				7-9						4	2	2	1
	TS												0	0	2	2
RO2	RX		1										1	1	1	0
	NOR						1						1	1	1	1
	I/C		3,5				3,5						4	4	4	2
	MAJ		7-9				7-9						4	2	2	1
	TS												0	0	2	2
	RX															
	NOR															
	I/C															
	MAJ															
	TS															

Instructions:

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

Facility: HARRIS		Date of Examination: 03/2008		Operating Test No.: SRO												
Competencies	APPLICANTS															
	SRO-U				SRO-I											
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	2,3 5,7 9	3,5 7,8 9, 10			2,3, 5,7, 9	2,3 6,7 8,9										
Comply With and Use Procedures (1)	All	1,3 5			1,3, 5	All										
Operate Control Boards (2)	NA	1,3 5,8 9, 10			1,3, 5,7, 9	NA										
Communicate and Interact	All	1,3 5,7 8,9 10			1,2, 3,5, 7,9	All										
Demonstrate Supervisory Ability (3)	All	NA			NA	All										
Comply With and Use Tech. Specs. (3)	2,3	NA			NA	3,5 6										
<p>Notes:</p> <p>(1) Includes Technical Specification compliance for an RO.</p> <p>(2) Optional for an SRO-U.</p> <p>(3) Only applicable to SROs.</p>																

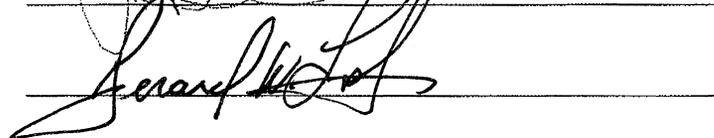
Instructions:

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

Author:



NRC Reviewer:



Facility: HARRIS	Date of Examination: 03/2008		Operating Test No.: RO													
Competencies	APPLICANTS															
	RO1				RO2				RO3							
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	4,6 8,9 10	2,4 6,9			2,3, 5,7, 9	3,5, 7,8, 9,10			4,6 8,9 10	2,4 6,9						
Comply With and Use Procedures (1)	1,4 6	2,4 6			1,3, 5,	1,3, 5,			1,4 6	2,4 6						
Operate Control Boards (2)	1,4 6,8 9, 10	2,4 6,7 9			1,3, 5,7, 9	1,3, 5,8, 9,10			1,4 6,8 9, 10	2,4 6,7 9						
Communicate and Interact	1,4 6,8 9, 10	1,2 4,6 7,9			1,2, 3,5, 7,9	1,3, 5,7, 8,9, 10			1,4 6,8 9, 10	1,2 4,6 7,9						
Demonstrate Supervisory Ability (3)	NA	NA			NA	NA			NA	NA						
Comply With and Use Tech. Specs. (3)	NA	NA			NA	NA			NA	NA						
<p>Notes:</p> <p>(1) Includes Technical Specification compliance for an RO.</p> <p>(2) Optional for an SRO-U.</p> <p>(3) Only applicable to SROs.</p>																

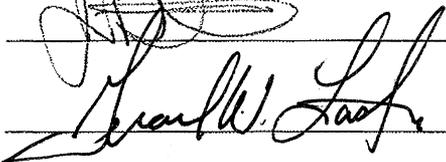
Instructions:

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

Author:



NRC Reviewer:



Facility: HARRIS		Date of Exam: 3/21/08		Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>			
Item Description	Initial						
	a	b*	c*				
1. Questions and answers are technically accurate and applicable to the facility.	PD	DGR	AG				
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	PD	DGR	AG				
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	PD	DGR	AG				
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).	PD	DGR	AG				
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: ___ the audit exam was systematically and randomly developed; or ___ the audit exam was completed before the license exam was started; or ___ the examinations were developed independently; or <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or ___ other (explain)	PD	DGR	AG				
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	PD	DGR	AG	
	22/4	19/8	34/13				
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		PD	DGR	AG
	40% / 32% 30 / 8		60% / 68% 45 / 17				
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	PD	DGR	AG				
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.	PD	DGR	AG				
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	PD	DGR	AG				
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.	PD	DGR	AG				
a. Author		Printed Name / Signature		Date			
b. Facility Reviewer (*)		<u>John Dalton</u>		3/20/08			
c. NRC Chief Examiner (#)		<u>Gerard W. Laska</u>		2/24/08			
d. NRC Regional Supervisor		<u>Malcolm T. Wideman</u>		3/20/08			
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. U/E/S	7. 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.]

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

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
76	H	2	X			X								U	<p>002G2.2.22 Appears to match K/A. Some Backwards logic used in stem and distractors. Basis document states that the assumption is that the PORV or steam dump valves fail to work, we should work this into the distractors, steam dumps and PORVs fail to operate etc. We can discuss this. Does not appear that distractors A and B are not plausible as written. MOD</p> <p>Modified from Harris 2007</p> <p>Both independent examiners agree that question is unsat.</p> <p>Changed all distractors and portions of the stem Question appears to be SAT 1/23/2008</p>
77	H	2				X						X		U	<p>005G2.4.50 Does not appear to match the K/A, unless these actions are listed in the ARP. As written, distractors c and d are not credible, if the rod will not move, how can the rod be realigned. The distractors should read align the other group rods to 198, or = or- 12steps. NEW</p> <p>Both independent examiners agree. Times are not included in distractors B and D for when accident analysis needs to be complete.</p> <p>TABLED QUESTION TO BE WORKED ON LATER</p> <p>Question replaced SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
78	H	1				X									U	<p>006G2.1.33 Appears to meet K/A. This question appeared on several exams. Distractors B and D do not appear to be plausible. (Maintain linear heat rate in the core at or above limits?).(Listed as modified) BANK</p> <p>Last Harris Audit and Summer 2007 and 2006 retake... Not modified Summer 2006 had same parameter. Both independent examiners agrees not modified</p> <p>Changed to level (instead of boron or pressure) 2 distractors changed. REFER TO BOSS LAST HARRIS AND SUMMER 2007/2006. 1/23/2008 reviewed and determined to be SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
79	H	2				X							X	U	<p>012A2.04 Kind of Matches K/A. Not SRO only Distractors A and B are not plausible (they are the same). The K/A asks for the impact on the RPS, and the distractors state RX trip or not tripped. While this is an indirect result of the loss of power the effect on RPS is nothing. This is really a question of what is the impact on a loss of a dc bus. Try writing the question with out the trip or no trip.</p> <p>BANK</p> <p>WCNOC 2007 NRC</p> <p>Both independent examiners agree. That question is unsat for reasons given. Discussed using different components in the RPS system i.e. UV coil or other component. LOOK AT AGAIN LATER. 1/23/2008</p> <p>Changed distractors C and D added UV coils SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
80	H	2	X										X	U	<p>015A2.02 Appears to match K/A. What procedure directs the operator to maintain power as is. The ARP included directs the operator to maintain power less than P-10. Not sure it is SRO only. This was an RO question on the Summer exam, and it is slightly modified, (overcompensated versus undercompensated) but there is nothing to make it SRO only (there is a note on your sheet to maybe add a TS basis. MOD</p> <p>Modified from Summer 2007</p> <p>Both independent examiner noticed that answer is opposite, but action is the same. Both independent examiners agree that question is Unsat, and it is a Bank Question.</p> <p>Changed Stem and Distractors, look at again later to determine if question still has discriminatory value. 1/23/2008</p> <p>Changed as requested SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
81	H	2											X	U	<p>016A2.03 Kind of meets the K/A. What is the impact of the channel failing High, and what procedures are used to control or mitigate the failure? I know that this was used on the vogtle exam in 2005, and I really don't agree with the statements that were made as to why it meets the K/A. But will allow. This question can be answered using only TS entry conditions and applicability. Therefore it is not SRO Only. It appears that the question assumes that you are in mode one to begin with, but this is not stated.</p> <p>MOD</p> <p><i>Modified from Vogtle 2005</i></p> <p>Both examiners agree that question is Usat.</p> <p>Licensee made several changes to question appears to be SAT. Will have another Examiner review to verify. 1/23/2008</p> <p>SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
82						X							X	U	<p>025AA2.02 Appears to match K/A. Not SRO only, this is just entry conditions for procedures. Distractors A and B are not credible. Try using variations from distractors C and D along with actions that would mitigate the event.</p> <p>NEW</p> <p>Both examiners agree that question is Usat. For reasons given.</p> <p>Did not come to a resolution to this question Large discussion on SRO (selection of procedures 10 CFR 55.43 (b) (5). Plausibility of distractors still in question. 1/23/2008</p> <p>Manually align SI flow through BIT SAT 3/18/2008</p>
83	H	2												E	<p>026AG2.1.27 Question appears to match K/A. Need to change the distractors that state: Mode 1 operations may continue if RCP cooling is maintained. What cools RCPs at Harris? Question does appear to be modified. BANK</p> <p>Sequyoah 2007</p> <p>Made some changes to stem during meeting. Look at again after SRO portion changes are complete. 1/23/2008 Modified</p> <p>Replaced with 057AG.2.1.7 SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A		
84	H	2	X			X								<p>U 026G2.4.31 Question appears to match K/A. Appears to be SRO only. Distractor B is not credible, why would anyone remain in EOP-10 and perform actions from another EOP? The applicant is informed in the stem that the swapover to cold leg recirc is complete, so why would anyone select loss of emergency coolant recirc? This makes distractors C and D not plausible. Why would throttling SI flow increase Cmt Spray suction and discharge pressure, do they take a suction on the same sump points? NEW</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Both examiners agree that question is Usat. For reasons stated. Added some RHR parameters in the stem to make distractors more plausible. Removed EPP-12 references in B and D distractors will look at again after SRO portion of exam is complete. 1/23/2008</p> <p>Changes made to question as requested SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
85													X		U	<p>038 G2.1.14 Does not meet K/A. This question is on S/G Tube leakage, not a rupture. The K/A ask for a tube rupture. Your original states that it is tied to 037G2.1.12. MOD</p> <p>Modified from another NRC test question that was not listed.</p> <p>Replaced question with one that matches K/A. Appears to be SAT. 1/23/2008</p> <p>Reviewed again SAT 3/18/2008</p>
86	H	2				X									U	<p>040AA2.05 appears to match K/A. Distractor D is not plausible. Why would anyone go to SI termination if the criteria were NOT met? SI termination criteria is RO knowledge, and foldout page direction is RO knowledge. This is not SRO only</p> <p>MOD</p> <p>Modified from Harris 2007</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Another Large Discussion about SRO only. Will Discuss with Malcolm. 1/23/2008</p> <p>Made changes with Xfer form Epp-14 SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
87	F	2	X				X								U	<p>068AA2.10 Appears to match K/A. The whole top of the question is window dressing. Which ONE of the following describes how reactor power will be monitored at the remote shutdown panel after the control room is evacuated , and what is the minimum emergency.... Does the plant have intermediate monitors in the control room? If not distractors A and B are not credible. If they do and the intermediate detectors are off-scale low when the source range flux monitors begin to indicate then A would also be correct. Distractors B and C are not plausible. Evacuate the control room and its only a NOUE?</p> <p>NEW</p> <p>Both examiners agree that question is Usat. For reasons stated. Removed window dressing.</p> <p>Changed other portions of the question. Added site area and alert in distractors. Still need to determine if this is a direct look up. With the reference for question 99.1/23/2008</p> <p>SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
88	H	1				X							X	X	U	<p>073G2.1.32 Is this a process radiation monitor? If not this does not match the K/A. Distractors B and D are not plausible. When would anyone enter 3.03 for one of anything being inoperable. These appear to be just technical specification entry requirements which is also RO knowledge requirements. Not sure this has any discriminatory value. The distractors with 3.3.3.1 entries are subsets, if you were in 3.30 for this reason you would also be in 3.3.3.1 MOD</p> <p>Modified from Harris 2007</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Table and Replace. 1/23/2008</p> <p>Replaced question and added reasons for SRO only SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
89	H	2				X							X	X	U	<p>078A2.01 May not really meet the K/A as written. Not SRO only knowledge. The applicant does not need to know the impacts because all of the actions are different. Distractor C is not credible. Why would anyone isolate the air dryer first before bypassing or placing the other in service first this would cause a loss of IA. This question can be answered using RO knowledge.</p> <p>Bank Harris 2005 NRC</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Tabled (Not SRO knowledge).</p> <p>Wrote new question SAT 3/18/2008</p>
90	H	2				X	X								E	<p>WE04/G2.1.33 Appears to match K/A. Looking at the procedure some one is going to ask did we stop RHR A, and close 1 SI 322 prior to leaving EPP-013? This question needs some major enhancements. But can be salvaged.</p> <p>NEW</p> <p>All examiners agree E.</p> <p>Discussed Changing K/A. Operations did not believe the 3.0.3 statements should be tested while in the ERGs. 1/23/2008.</p> <p>Changed KA to WE04EA1.3 new question SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
91	H	1	X			X							X	U	<p>WE06/G2.1.2 Appears to match K/A. Not really SRO only knowledge. . With core exit thermocouples less than 730 degrees F, no entry is ever made into C.1. Therefore distractors A and C are not plausible, and with C.1 and C.2 the only choices most of the conditions in the stem are window dressing. What makes the distractors that isolate the PORVs plausible? There are no indications of the PORVs lifting, so why would anyone isolate them? RO's need to know CSF entry conditions, and with no indications of PORV problems other distractors are not credible.</p> <p>BANK</p> <p>BVPS 2007 NRC</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Modified Question appears to be SAT. 1/23/2008</p> <p>SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
92	H	2	X			X								X	U	<p>WE10/EA2.1 Appears to match K/A. Distractor B is not plausible, there are no indications of a faulted steam generator. Two of the choices start with transitions. The other tow should start with remain in EPP-05 and repressurize the RCS to minimize void growth, etc. It is difficult to determine if the question is attempting to show that a void is present. With pressurizer level trending up slowly an operator could believe that charging flow was adequate to make pressurizer level rise. (I did not think that there was a void, but some one could look at pressurizer level and the cooldown and claim that A was a correct choice, If the entry in to EPP-06 us based on the cooldown rate then this is RO knowledge (entry conditions for procedure) unless it is only stated in the body of the EPP-05.</p> <p>BANK</p> <p>Harris 2005 NRC</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Reworked Distractors and Stem appears to be SAT. Will have another examiner review.</p> <p>1/23/2008 SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
93	H	2											X	U	<p>WE11/EA2.2 Appears to match K/A. Does not appear to be SRO only. Question can be answered using systems knowledge and CSF entry conditions. Distractors B and D would be more plausible if was stated to reduce ECCS flow to the values required in attachment 1 of EPP-012. Suggest putting the procedure first and the actions second, ie, remain in EPP-012 and stop all pumps taking a suction from the RWS T. Remain in EPP-012 and reduce ECCS flow to the value listed in attachment 1.</p> <p>BANK</p> <p>WCNOC 2007 NRC</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Examiner does not believe that this is SRO only knowledge. Will have Malcolm look at question and decide fate. 1/23/2008</p> <p>Left question as is SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
94	H	2	X											X	U	<p>G2.1.20 Appears to meet K/A. Not SRO only. Answered from foldout page. This is RO knowledge. With RCPs running could you reach the conditions listed in current plant conditions? A RCS temperature at 520 and the other loops at 550? This does not seem plausible to me. (With pumps running this would all be mixed).</p> <p>BANK (WBN) by FJE</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Tabled Question 1/23/2008</p> <p>added actions taken SAT 3/18/2008</p>
95	H	2	X				X								U	<p>G2.1.34 Kind of matches K/A. It would have been better for the question test what was exceeded and how to get it back within limits. As written Distractor B is no longer plausible. If RCS activity went down and secondary went up, how could the problem be high RCS activity? With the parameters listed in the stem distractors A and C are not plausible, because none of the secondary parameters are listed. This question can be salvaged with some work.</p> <p>NEW</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Made changes to stem and distractors will look at final version when completed. 1/23/2008</p> <p>SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
96	F		X			X									U	<p>G2.2.22 Appears to match K/A. Teaching in stem (applicable in modes 1 and 2). Distractors C and D are not plausible. Film boiling? Could we come up with something different.</p> <p>BANK</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Licensee to rewrite question. 1/23/2008</p> <p>Rewrote question SAT 3/18/2008</p>
97	F	2	X			X									U	<p>G2.2.7 Appears to match K/A. With the way the question is written, why would anyone choose any answer besides D, especially with the words if required a safety evaluation has been approved?</p> <p>Distractors a, b, and c not plausible as written.</p> <p>BANK</p> <p>BVPS 2007 NRC</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Examiner to supply new K/A. 1/23/2008</p> <p>G2.2.2 Question replaced, SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
98	F	2				X								U	<p>G2.3.6 Question appears to match K/A. The modified portion of the question is the type of release that is allowed from a tank. An NLO knows that a continuous release is not allowed from a WMT. The previous question also asked from which tank a continuous release could be conducted, and the WMT tank was listed as the tank that the release was not allowed from. Not sure this is really modified. May not be SRO only knowledge, if RO and NLO conduct releases. Will have another Examiner review.</p> <p>MOD</p> <p><i>Harris 2007</i></p> <p>Two independent examiners stated question was not modified, information was just rearranged.</p> <p>Licensee still believes that this meets the definition of Modified. Will consider changing. Tabled. 1/23/2008</p> <p>Replaced with new question SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
99	H	1				X								E	<p>G2.4.41 Question appears to match K/A. Giving the applicant the reference listed may help answer question # 87. The only difference is that in the first question the Rx trip breakers were opened from the MCB and in the modified version the reactor was tripped locally. So why would any one pick distractors A and B? Will have another examiner review to determine if it is truly modified. Distractors A and B will not discriminate.</p> <p>MOD</p> <p>Harris 2007</p> <p>Appears to be modified. If reference does not answer any other questions may be allowed.</p> <p>Tabled 1/23/2008</p> <p>Replaced with new question SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
100	H	2										X	X	U	<p>G2.4.49 Question does not match K/A. No immediate operation of plant systems, components or controls is indicated. Not SRO only this can be answered using < 1 hour technical specification knowledge, with is RO knowledge. Will a loss of off-site result in a loss of DC?</p> <p>Need to make sure the basis statements of distractors A and B will happen.</p> <p>BANK</p> <p>Both examiners agree that question is Usat. For reasons stated.</p> <p>Added actions appears to be SRO knowledge with basis statements and actions. Discussed with operations rep the plausibility of performing core alterations with a vital battery out of service. Licensee to check and will adjust question accordingly. 1/23/2008 SAT 3/19/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
<p>Instructions [Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]</p>																
1.	Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.															
2.	Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).															
3.	Check the appropriate box if a psychometric flaw is identified:															
	<ul style="list-style-type: none"> • The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information). • The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc). • The answer choices are a collection of unrelated true/false statements. • The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable. • One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem). 															
4.	Check the appropriate box if a job content error is identified:															
	<ul style="list-style-type: none"> • The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content). • The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory). • The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons). • The question requires reverse logic or application compared to the job requirements. 															
5.	<u>Check questions that are sampled</u> for conformance with the approved K/A and those that are <i>designated SRO-only</i> (K/A and license level mismatches are unacceptable).															
6.	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?															
7.	At a minimum, explain any “U” ratings (e.g., how the Appendix B psychometric attributes are not being met).															

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
1	H	2											X		E	001A3.04 Appears to match K/A. The stem states the demand for rod motion, and the column in the answers just states ROD MOTION, The demand will be in the outward direction, but with rods at 216 steps and in automatic, no rod motion will occur. May need to clear this up. Otherwise SAT BANK WCNOC 2007 Enhanced SAT 3/13/2008
2	H	2											X		U	002 A2.02 Question does not match K/A. This question asks really what happens on a loss of pressurizer level. NEW Developed new question SAT 3/13/2008
3	H	2													S	003AK1.11 Question appears to match K/A. BANK McGuire 2005 SAT 3/13/2008
4	H	2											X		E	003K5.03 Question kind of matches K/A. The reasons for distractors A and C are not as in depth as those for the other distractors. Why is the affected loop Tave unreliable? BANK modified distractors b and d. SAT 3/13/2008
5	H	2		X											E	004K5.19 Question appears to match the K/A. All of the responses have a number in them except for the

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																correct answer. Need to have a number in it like changing the pot setting from one number to another. (That would increase boron concentration. NEW Changed number of turns and distractor d. SAT 3/13/2008
6	F	2				X									E	005K1.11 Question appears to match the K/A. Distractors A and D do not appear to be plausible. What is the significance of the temperature of 345 °F? What is the temperature listed in the P & L for placing RHR in service in the cool down mode? BANK Changed all distractors, and added temp and pressure to all. SAT 3/13/2008
7	H	2													S	005K6.03 Question appears to match K/A. Need to make sure that with 1-RH 20 fully closed and 1 RH 30 at 70% open flow would be greater than 3750. Otherwise SAT MOD Wolf Creek 2007 SAT 3/13/2008

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
8	H	2				X									U	006K1.08 Question appears to match K/A. With charging in automatic (normal operation) charging flow will not be off scale high. (Most are limited to about 150 gpm at NOP/NOT. I understand that an SI has occurred, and RCS pressure is reduced, but I don't think FI-122-1 will be off scale high at anytime in automatic. This makes distractors C and D not plausible. Enlighten me. NEW Changed distractor A to 600 gpm SAT 3/13/2008
9	F	2											X		U	006K4.05 Question does not meet K/A. This question essentially asks what SI parameter is reached and its coincidence the K/A asks for knowledge of ECCS design features and or interlocks which provide for the following Auto start of HPI/LPI/SIPs. There is nothing in this question that address this. BANK (Harris) Changed all distractors and stem SAT 3/13/2008
10	H	2													E	007AG2.1.23, I believe this K/A relates to Rx Trip/ stabilization-Recovery. If it does then this meets the K/A. Not Sure that distractor C is plausible. It would also help to have the procedure direction. For example: A. The reactor is tripped, perform a normal boration as directed by EPP-004 using normal operating procedure XXX. B. The reactor is tripped, perform an emergency

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															<p>boration as directed by EPP-04 using AOP-002</p> <p>C. The reactor is not tripped, manually insert control rods in accordance with FRP S.1 until all rods are on bottom and reactor is locally tripped.</p> <p>D. The reactor is not tripped, initiate an emergency boration of RCS in accordance with FRP S.1 until adequate SDM is verified.</p> <p>BANK</p> <p><i>Sequoyah 2007</i></p> <p>Added procedure direction SAT 3/13/2008</p>
11	H	2	X			X								E	<p>007K4.01 Question appears to match the K/A. Distractor A is not plausible. If pressure was high why would you purge it (it should be vented as stated in the APP) Procedures should be listed with all choices, i.e., vent IAW OP-100 or drain IAW OP-100 and give the correct section number. This will make the distractors more plausible. In the stem change second bullet to: A pressurizer PORV appears to have some seat leakage, and the third bullet to The associated PORV isolation valve failed to closed when attempted.</p> <p>BANK</p> <p>changed purge to vent, and added procedure reference. SAT 3/13/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
12	H	X													E	008A2.08 Question appears to match K/A. If the actions are in accordance with a procedure, then the procedure should be listed in the stem. In accordance with APP... NEW Added APP SAT 3/13/2008
13	H	2				X						X			U	008AK2.03 Does not appear to meet the K/A. There is no controller or positioner mentioned in the question. I understand that the indication for the PORV is in the correct distractor but the question really does not address how it got there and how it relates to the accident. (Although it is the cause). Distractor B is not credible, nothing in the stem relates to a SGTR. NEW Changed stem and all distractors SAT 3/13/2008
14	H	2													S	009EK2.03 Appears to match K/A. SAT MOD Changes made to question still SAT 3/13/2008
15	H	2													S	010k2.01 Appears to match K/A. SAT MOD No changes made from initial submittal SAT 3/13/2008
16	F	2													E	011EA1.15 Appears to match K/A. Need to add design basis large break LOCA. There are some defined large break LOCAs where RCS pressure

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															does hang up about 400-500 pounds and RCS pressure will be above the RHR shutoff head. (10,000 gpm). NEW No changes made from initial submittal Added design basis to stem SAT 3/13/2008
17	F	2				X								U	011K2.01 Appears to match K/A. A and B do not appear to be plausible. Please explain what makes them plausible, or find other suitable plausible distractors. MOD No changes made from initial submittal Used NSW pumps SAT 3/13/2008
18			X											E	012A3.02 Appears to match K/A. Some teaching in stem "causing a reactor trip". There is more that you can do with this question. Rx tripped/bistables illuminated, Rx not tripped/bistables illuminated. BANK Changed B distractor and rate trips. SAT 3/13/2008
19	H	2												S	012K6.03 Appears to match K/A. SAT Changed from original submitted question. Listed as bank, however with changes it is now: Modified. 2006 VCS CHANGED Question SAT 3/13/2008
20	H	2												E	013K3.03 Appears to match K/A. Changed from original submitted question. Will both 1-CB2 and 6 being open cause a release? If so then could B be correct? Listed as bank, however with changes it is

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															now: Modified. 2007 VCS CHANGED Question SAT 3/13/2008
21	H	2				X									U 015AK1.05 Appears to match K/A. Which loop is RCP 1C in? I assumed loop 3. Why would Delta T remain the same be plausible with the loss of an RCP? BANK No changes made from initial submittal Changed question loop 1 and 3, correct values added. Changed to RCS flows. SAT 3/13/2008
22	H	2													E 016K3.03 Appears to match K/A. Add steam dumps will receive an arming signal to "A" distractor for symmetry. Question will then be SAT NEW No changes made from initial submittal made changes as requested SAT 3/13/2008
23	H	2													S 017K6.01 Appears to match K/A. Made changes to original submitted question. SAT BANK CHANGED SAT 3/13/2008
24	H	2													E 022AA1.01 Appears to match K/A. Made changes to original submitted question. Please explain difference between AH-3 and AH-4, How many fans etc. This question is worded much different than the original submittal.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																NEW CHANGED Explained, and modified stem. SAT 3/13/2008
25	F	2													E	022AG2.1.28 Appears to match K/A.. If the controller for divert to RHT is taken to manual would this be considered a function lost? Maybe we should say with out any operator actions? NEW No changes made from initial submittal Modified stem SAT 3/13/2008
26	F	2													E	022K1.01 Question appears to match K/A. Some of the components of this question are the same as those in #24. Train VRS cooler unit. Can we change something to make it more different. Like SW flows etc. NEW Format changed only made. Modified stem SAT 3/13/2008
27	F	2													E	024AK2.03 Question appears to match K/A. What controls boration flow through FI-110 can this be adjusted? Does FI-110 scale indicate 90 gpm? NEW No changes made from initial submittal. explained SAT 3/13/2008
28	H	2													E	025AA1.20 Appears to match K/A. Flow rates do not really mean anything in this question both BIT flows are 500 gpm and both Normal charging lines are 150 gpm. We can leave the flows if it does not help

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																answer any other questions, but it is not required the way this question is written. (For instance with 2 CSIPs running with the BIT valves open would not flow be greater than 500? NEW No changes made from initial submittal. completely changed question. SAT 3/13/2008
29	H	2												E	026A3.01 Question appears to match K/A. With a LOCA in progress and RCS at 1600 psig has enough steam entered the containment to cause pressure to 10.5 psig? MOD No changes made from initial submittal modified initial condition to 600 psig. SAT 3/13/2008	
30	H	2												S	026G2.2.22 Question appears to match K/A. SAT MOD No changes made from initial submittal SAT 3/13/2008	
31	H	2												E	027AA1.03 Question appears to match K/A. Distractor analysis for B is incorrect. The setpoint adjustment, is this a potentiometer? If it is we should use lower/raise the pressure setpoint potentiometer. MOD No changes made from initial submittal SAT 3/13/2008	
32	H	2												E	029A4.04 Appears to match K/A. Second part of question asks for the action required, but the second	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															part of the answers are not written like an action from the procedure, the distractors should state something like Immediately evacuate containment, or Immediately dispatch radiation protection personnel to determine if.... MOD No changes made from initial submittal modified distractors SAT 3/13/2008
33	F	2				X								U	029EA2.05 Question appears to match K/A. The way the question is written the applicant need only know the reason for opening the PORVs in S.1. If the question was changed so that the applicant had to determine what condition the plant was in and what was required based on those conditions this may be acceptable. Or we could use variations of open 1 PORV or Both PORVs and use some of the reasons stated. BANK No changes made from initial submittal. made changes SAT 3/14/2008
34	H	2										X		U	033AK3.02 Does not meet K/A. The K/A asks for a knowledge of the REASONS for the following responses as they apply to... The actions are acceptable, but the question must cover reasons. NEW modified distractors Cand D SAT 3/14/2008 NEW No changes made from initial submittal

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
35	F	2				X								E	034G2.1.14 Appears to match K/A.. Distractor D is not plausible. (Work would never get done). Need to develop another distractor to improve plausibility. NEW No changes made from initial submittal changed distractor D. SAT 3/14/2008
36	F	2												E	036AA2.01 Question appears to match K/A. Which train. Do they not have separate nomenclature? A train FHB will start, A and B train FHB ventilation will start etc. This is very general. NEW No changes made from initial submittal Modified as requested SAT 3/14/2008
37	H	2				X								U	038EK1.03 Question appears to match K/A. Not sure that there is a correct answer. The WOG does discuss the problems with an RCS depressurization without RCPs, but addresses only operating one PORV, not PORVs. B and C could also be considered sort of correct, as you depressurize and loose subcooling, there is a limit as to how far you can depressurize. Typically the step states to depressurize until level is XX, Pressure is equal to or less than ruptured S/G pressure, or subcooling is either 10 or 20 degrees. So this is a concern. This question need some major revision. BANK No changes made from initial submittal Modified B and C SAT 3/14/2008

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
38	F	2												S	039A4.01 Question appears to match K/A. Not very discriminating. SAT NEW No changes made from initial submittal SAT 3/14/2008
39	F	2	X	X		X								U	040AK1.07 Question Appears to match K/A.. Distractors C and D are not plausible. Not sure that B is a totally correct answer. While this statement may be true, it is not the stated reason in the WOG Rev 2 reason for not feeding the faulted generator. If flow was needed for cooldown flow could be initiated using guidance for feeding a hot dry generator. Some of the information in the stem is not required to answer the question and may be teaching. This question needs some work. NEW No changes made from initial submittal Made changes after discussion. SAT 3/14/2008
40	H	2				X								U	041K1.05 Question appears to match K/A. Distractors A and D not credible. May need to shorten to two items in distractors vice 3. Will discuss. MODIFIED No changes made from initial submittal

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
41	F	1				X									U	045K5.23 Question appears to match K/A. Distractors A, B, and C are not plausible. Why would anyone manually withdraw control rods above the 100% limit, or set boron concentration at the 100% limit prior to a load increase? Distractors need to be fixed or a new question developed. BANK No changes made from initial submittal Question rewritten SAT 3/14/2008
42	F	2				X									U	054AA2.04 Question appears to match K/A. Distractors B and D are not plausible. These valves are required by technical specifications to be open in mode 1. Does any thing have to be reset to regain control of the valves? If so you could do some iterations off of this to determine the ability of the operators to determine if they have proper operation of the afw pumps and regulating valves. C distractor analysis is not totally correct, the MDAFW pumps started on a loss of the last running MFW pump. NEW No changes made from initial submittal Question rewritten SAT 3/14/2008
43	H	2	X			X							X		U	056A2.12 Question kind of matches the K/A. Did not really address the procedure actions. Stem (second bullet) states: An Extreme HI-HI....The lesson material calls this an Extra HI-HI level. Which is it? It appears that the answer is only partially correct. If I read the material correctly also the 1B and 2B heaters will also be bypassed and power should be reduced to 70%. Distractors should be 1A and 2A

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															<p>heaters are bypassed reduce turbine load to 90%. 1A,2A and 1B,2B heaters are bypassed reduce Turbine load to 70%. And you could do an iteration off of Reactor Power. The procedure reference should also be used. IAW OP-... or AR.</p> <p>NEW</p> <p>No changes made from initial submittal</p> <p>SAT 3/14/2008</p>
44	H	2					X							U	<p>056AG2.1.2 Appears to match K/A.. C and D are both correct answers. If natural circulation does not exist, (and from the indications given and the procedure step it appears that it is not) then the correct action is to increase dumping steam from the intact S/Gs and in this case it would be via the SG PORVs. You can also tell from the stem that heat is being removed, and nothing would be wrong with verifying that natural circulation exists in D. This could also be considered correct.</p> <p>Need to make one completely wrong, but still maintain plausibility.</p> <p>BANK</p> <p>No changes made from initial submittal</p> <p>Reworded all distractors. Question rewritten SAT 3/14/2008</p>
45	F	2												S	<p>058AK3.02 Question appears to match K/A. SAT</p> <p>NEW</p> <p>No changes made from initial submittal</p> <p>SAT 3/14/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
46	F	2												S	059A3.02 Question appears to match K/A. SAT NEW No changes made from initial submittal SAT 3/14/2008
47	H	2				X						X		U	059AG2.4.50 Question does not match K/A. There is no verification of system alarm setpoints. Distractors A, B, and C not plausible. If the release will be automatically isolated, why would you secure ESW? In B, if the release was terminated, the radwaste operator would verify isolation. Distractor C, if the ESW system does not connect to the WPB why would anyone select this? BANK No changes made from initial submittal Replaced question SAT 3/14/2008
48	F	2	X											E	059K3.03 Question appears to match K/A. Need to add actual feedwater flow to the stem. Someone could select and argue that B is also correct. Otherwise SAT. BANK No changes made from initial submittal Made changes as requested SAT 3/14/2008
49	F	2												S	060AG2.1.32 Question appears to match K/A. SAT NEW No changes made from initial submittal SAT 3/14/2008

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
50	F	2				X								E	061G2.2.22 Question appears to match K/A. Change Distractor D to read immediately enter TS 3.0.3 and be in hot Otherwise SAT. No changes made from initial submittal SAT 3/14/2008
51	H	2				X	X							U	061K5.01 Question appears to match K/A. With an increase in AFW flow how can you be sure if the heat transfer rate will not increase? You are changing 2 variables and any one of these parameters could be changed enough in one direction more than the other and result in an increase the heat transfer rate. They all could be argued as correct or incorrect depending on the values used. I.E. a very large AFW flow increase along with a small RCS temperature decrease may still result in an increased heat transfer rate. BANK No changes made from initial submittal Changed format and reduced to one variable. SAT 3/14/2008
52	F	2												S	062A1.03 Question appears to match K/A. Distractor C should state ...when the instrument bus and PIC <u>are</u> energized. Otherwise SAT. BANK 2005 NRC-HARRIS No changes made from initial submittal Made changes as requested SAT 3/14/2008

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
53	H	2											X		U	063AK3.02 Question does not match the K/A. What are the reasons for the actions. Why is the D/G disabled or any of the other items listed that were disabled. NEW No changes made from initial submittal SAT 3/14/2008
54	F	2													S	063K3.02 Question appears to match K/A. SAT BANK No changes made from initial submittal SAT 3/14/2008
55	F	2													S	064K4.04 Question appears to match K/A. SAT NEW No changes made from initial submittal SAT 3/14/2008
56	F	2											X		U	069AK2.03 Question does not match K/A. The relation between containment integrity and the doors is not being tested. Question is not modified. Nothing pertinent in the stem was changed. Remove if any from the stem, none of the distractors list No action is required. Recommend : Which ONE of the following correctly describes the status of containment integrity and states the T/S action required? A. Containment Integrity IS met; immediately verify the outer door is closed. B. Containment Integrity is NOT met; immediately

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															<p>verify the outer door is closed.</p> <p>C. Containment Integrity IS met; verify the outer door is closed with in 1 hour.</p> <p>D. Containment Integrity is NOT met; verify the outer door is closed with in 1 hour.</p> <p>Modified 2007 NRC-HARRIS</p> <p>No changes made from initial submittal</p> <p>Changed question SAT 3/14/2008</p>
57	F	2				X									<p>U 073A4.02 Question appears to match K/A. The lesson material supplied with this question does not mention anything about RM-11 interfacing at all with RM-23. However all three incorrect distractors have RM-23 listed in them. (RM-80 is listed) If there is not any interface/interaction then how can they be plausible? Please explain.</p> <p>BANK</p> <p>No changes made from initial submittal</p> <p>Modified bank question SAT 3/14/2008</p>
58	H	2										X			<p>U 074EK1.06 Not sure this meets the K/A. Need more information.</p> <p>No changes made from initial submittal</p> <p>Made changes to meet K/A SAT 3/14/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
59	H	2												U	<p>076A2.01 Question appears to match the K/A. Distractors B and D do not appear to be plausible. Nothing in the stem relates to ESW. Are these systems normally cross-connect? Would the leak affect ESW in any way?</p> <p>BANK HARRIS 2005</p> <p>No changes made from initial submittal</p> <p>Rewrote distractors and explained.</p> <p>SAT 3/14/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
60	F	1				X								U	<p>078G2.1.28 Question appears to match K/A.. (Function of 1SA-506), but does not describe the purpose. The lesson material states that 1SA-506 isolates at 90 psig decreasing in the IA header, Two of the distractors state that the isolation will occur at 90 psig, and both of these distractors are incorrect. This may be in an effort to make them appear more plausible. Recommend the following:</p> <p>Which ONE of the following describes the operation of Service Air Header Isolation valve, 1SA-506?</p> <p>A. Closes automatically when IA header pressure reaches 90 psig decreasing; Automatically opens when IA header pressure rises above 90 psig.</p> <p>B. Closes automatically when IA header pressure reaches 75 psig decreasing; Automatically opens when IA header pressure rises above 75 psig.</p> <p>C. Closes automatically when IA header pressure reaches 90 psig decreasing; Must be manually opened when IA header pressure rises above 90 psig.</p> <p>D. Closes automatically when IA header pressure reaches 75 psig decreasing; Must be manually opened when IA header pressure rises above 75 psig.</p> <p>NEW</p> <p>No changes made from initial submittal</p> <p>No changes made from initial submittal BANK</p> <p>Made changes as requested SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
61	H	2											X		U	<p>103A1.01 Question does not really match K/A. We are not testing exceeding the design limit. Recommend the following:</p> <p>Same initial conditions and stem;</p> <p>A. Containment Vacuum Relief system will operate to restore containment pressure to -1.5 inches H₂O. Containment purge operation is then required to restore to -1.0 H₂O.</p> <p>B. Containment Vacuum Relief system will operate to restore containment pressure to -1.5 inches H₂O. No other actions are required</p> <p>C. Containment Vacuum Relief system will operate to restore containment pressure to -1.0 inches H₂O. Containment purge operation is then required to restore to -0.5H₂O.</p> <p>D. Containment Vacuum Relief system will operate to restore containment pressure to -1.0 inches H₂O. No other actions are required.</p> <p>With A being the correct answer. Or something similar. (This is a 1 hour tech spec therefore it is RO Knowledge).</p> <p>NEW</p> <p>No changes made from initial submittal</p> <p>Modified as requested above. SAT 3/18/2008</p>
62	F	2				X									U	<p>WE04EK2.2 Question appears to match K/A. Distractors C and D are secondary monitor points this make them less desirable as plausible distractors. (SI flow is based on RCS pressure, and rad building radiation levels lowering is based on</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																<p>decay of activity) so why would any one pick these?</p> <p>Try using some initial conditions with a loca outside of containment in progress and then work off of which component would be isolated first, and what parameter would be used to determine if the leak is isolated. PZR level or RCS pressure rising.</p> <p>A. Correct Component and PZR Level rising. B. Wrong Component and RCS pressure rising. C. Correct Component and PZR Level rising. D. Correct Component and RCS pressure rising.</p> <p>Were D would be the correct answer.</p> <p>BANK (This particular K/A has been on several of the last exams.)</p> <p>No changes made from initial submittal</p> <p>Modified as requested above. SAT 3/18/2008</p>
63	H	2				X								E	<p>WE/05EA2.2 Question appears to match K/A. Distractors C and D are not plausible. Feeding all S/Gs is okay but it seems that the stopping point is when all S/Gs are greater than (value). These distractors should state until one S/G is greater than the appropriate value. (15% WR or 25 % NR).</p> <p>BANK</p> <p>No changes made from initial submittal</p> <p>Modified as requested above. SAT 3/18/2008</p>	
64	F	2				X								U	<p>WE/10EA1.3 Question appears to match the K/A. This question is listed as NEW, but was on the McGuire 2007 exam. The way the question is asking two things the level and the reason, With all the</p>	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
															<p>levels being different an applicant need only know the correct level and would not have to know the reason. If the applicant knew the reason, he could eliminate two of the distractors (and their levels). The question should be set up using two levels and two reasons for example;</p> <p>A. 25% to ensure minimum inventory for pressure control.</p> <p>B. 65% to ensure minimum inventory for pressure control.</p> <p>C. 25% to ensure adequate volume for collapsing the void.</p> <p>D. 65% to ensure adequate volume for collapsing the void.</p> <p>BANK</p> <p>No changes made from initial submittal</p> <p>Modified as requested above SAT 3/18/2008</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
65	F	2					X				X			U	<p>E11/EK3.3 Question appears to match K/A. The question asks for the reason and requirements for depressurizing the RCS. I am not sure of the these requirements. In distractor A (which is the correct answer) you state to reduce CSIP flow, however reducing RCS pressure will increase CSIP flow, it will allow later for CSIP flow to be reduced. Question and distractors are very wordy and confusing. Not sure that as written there is a correct answer. Distractor C and D are not plausible. If you maximize RCS subcooling how can you minimize RCS pressure.</p> <p>BANK</p> <p>No changes made from initial submittal Modified as requested above SAT 3/18/2008</p>
66	F	2				X	X							U	<p>G2.1.3 Question appears to match K/A. Agree that question is modified. Distractor C does not appear to be plausible. Why would you perform a turnover using attachment 5 and attachment 14, this doesn't make sense. In appeal space distractor D could be argued as correct if the S-SO desires. Need to fix distractors.</p> <p>MODIFIED</p> <p>No changes made from initial submittal Changed C and D distractors. SAT 3/18/2008</p>
67	H	2												E	<p>G2.1.32 Question appears to match K/A. Can you actually get to these conditions. During a startup turbine power usually lags behind NI and Delta T power due to the secondary plant being inefficient. Change the powers around so that they look more</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																like what normally happens in the plant, have Delta T be the higher indication and place it in distractor D instead of turbine power. NEW No changes made from initial submittal. Changed as requested. SAT 3/18/2008
68	F	2												S	G2.1.12 Question appears to match K/A SAT. No changes made from initial submittal. SAT 3/18/2008	
69	F	2					X							E	G2.2.26 Question appears to match K/A. If the boron concentration was 9 ppm greater than the amount required in the COLR then C could be argued as correct. Need to add boron level to the stem and have it be greater than the COLR so that if the boron concentration was lowered 10 ppm it would still be above the minimum amount listed in the COLR. BANK No changes made from initial submittal. Changed as requested. SAT 3/18/2008	
70	H	2												S	G2.3.2 Question appears to match K/A. SAT. MODIFIED No changes made from initial submittal SAT 3/18/2008	
71	F	2				X								U	G2.3.4 Question appears to match K/A. Similar to Administrative JPM A-3 but is somewhat different. Distractors A and C are not credible. Replace the individual's progress energy supervisor with	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
																Superintendent-Radiation Protection. NEW No changes made from initial submittal Changed as requested. SAT 3/18/2008
72	H	2				X									U	G2.4.10 Question appears to match K/A. Distractors C and D are not credible. Another question on the exam (#60) gives some IA header pressure actions and these occur at 90 psig, so why would someone choose C or D? NEW No changes made from initial submittal Modified question to remove question 60 concerns Changed as requested. SAT 3/18/2008
73	H	3													S	G2.4.29 Question appears to match K/A, Is this something you require RO's to know? SAT MODIFIED No changes made from initial submittal SAT 3/18/2008
74	H	2													S	G2.4.48 Question appears to match K/A.. SAT BANK No changes made from initial submittal SAT 3/18/2008

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
75	F	2	X											E	<p>G2.4.6 Question appears to match K/A. Stem should state: Which one of the following describes the RCP configuration and its basis in accordance with EPP-009 .</p> <p>BANK</p> <p>No changes made from initial submittal Changed as requested. SAT 3/18/2008</p>

Written Examination Grading
Quality Checklist

Facility: Harris 2008-301		Date of Exam: 03/21/2008		Exam Level: RO/SRO	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	DK	NA	JK		
2. Answer key changes and question deletions justified and documented	N/A	↓	N/A		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	DK		JK		
4. Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail	DK		JK		
5. All other failing examinations checked to ensure that grades are justified	N/A		N/A		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	DK		JK		
Printed Name/Signature			Date		
a. Grader	<u>Philip G. Capchart / DK Capchart</u>	<u>4/15/08</u>			
b. Facility Reviewer(*)	<u>N/A</u>	<u>N/A</u>			
c. NRC Chief Examiner (*)	<u>Gerardo W. Lasca / [Signature]</u>	<u>4/15/08</u>			
d. NRC Supervisor (*)	<u>Malcolm T. Widmann / [Signature]</u>	<u>02/16/08</u>			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

Post-Examination Check Sheet	
Task Description	Date Complete
1. Facility written exam comments or graded exams received and verified complete	03/26/2008
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	N/A
3. Operating tests graded by NRC examiners	4/15/2008
4. NRC chief examiner review of operating test and written exam grading completed	4/15/2008
5. Responsible supervisor review completed	4/16/2008
6. Management (licensing official) review completed	4/16/2008
7. License and denial letters mailed	4/17/2008
8. Facility notified of results	4/17/2008
9. Examination report issued (refer to NRC MC 0612)	5/2/2008
10. Reference material returned after final resolution of any appeals	N/A



SERIAL: HNP-07-175

January 4, 2008

Mr. Malcolm T. Widmann, Region II
United States Nuclear Regulatory Commission
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303-8931

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REACTOR AND SENIOR REACTOR OPERATOR
INITIAL EXAMINATIONS 05000400/2008301

Dear Mr. Widmann:

Enclosed are the proposed written examinations, operating tests, and supporting reference materials for the Reactor and Senior Reactor Operator Initial Examinations to be given at the Harris Nuclear Plant the week of March 10, 2008. This submittal complies with the requirement identified in your letter dated October 19, 2007, to provide these materials by January 7, 2008. The enclosed materials shall be withheld from public disclosure until after the examinations are complete.

If you have any questions regarding these materials, please contact Mr. John Dalton at (919) 362-3500.

Sincerely,

A handwritten signature in black ink, appearing to read 'G. Kilpatrick', written over a horizontal line.

Greg Kilpatrick
Superintendent – Operations Training
Harris Nuclear Plant

DGK/mgw

Enclosures

- c: Mr. P. B. O'Bryan (NRC Senior Resident Inspector, HNP) w/o Enclosures
Mr. V. M. McCree (NRC Acting Regional Administrator, Region II) w/o Enclosures
Ms. M. G. Vaaler (NRR Project Manager, HNP) w/o Enclosures

Mr. Robert C. Haag
SERIAL: HNP-07-175

bc: (w/o Enclosures)
Mr. J. R. Dalton
Mr. J. W. Gurganious
Mr. K. Henderson
Ms. T. M. Midgette
Mr. T. T. Toler
Mr. M. G. Wallace
Mr. J. C. Warner
Nuclear Records
Licensing File



November 30, 2007

SERIAL: HNP-07-161

Mr. Malcolm Widmann, Region II
United States Nuclear Regulatory Commission
Sam Nunn Atlanta Federal Center
61 Forsyth St., SW, Suite 23T85
Atlanta, GA 30303-8931

SHEARON HARRIS NUCLEAR POWER PLANT
DOCKET NO. 50-400/LICENSE NO. NPF-63
REACTOR AND SENIOR REACTOR OPERATOR
INITIAL EXAMINATIONS 05000400/2008301 OUTLINES

Dear Mr. Widmann:

Enclosed are the proposed examination outlines for the Reactor and Senior Reactor Operator Initial Examinations to be given at the Harris Nuclear Plant the week of March 10, 2008. This submittal complies with the requirement identified in your letter dated October 19, 2007, to furnish the outlines by December 17, 2007. The enclosed materials shall be withheld from public disclosure until after the examinations are complete.

If you have any questions regarding these materials, please contact Mr. John Dalton at (919) 362-3500.

Sincerely,

A handwritten signature in black ink that reads "W. Arthur Sylvester".

W. Arthur Sylvester for
Greg Kilpatrick

Superintendent – Operations Training
Harris Nuclear Plant

DGK/mgw

Enclosures

- c: Mr. P. B. O'Bryan (NRC Senior Resident Inspector, HNP) w/o Enclosures
- Mr. V. M. McCree (NRC Acting Regional Administrator, Region II) w/o Enclosures
- Ms. M. G. Vaaler (NRR Project Manager, HNP) w/o Enclosures

Mr. Malcolm Widmann
SERIAL: HNP-07-161

bc: (w/o Enclosures)
Mr. J. R. Dalton
Mr. J. W. Gurganious
Mr. K. Henderson
Ms. T. M. Midgette
Mr. T. T. Toler
Mr. M. G. Wallace
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