

Administrative Documents

SEQUOYAH APRIL/MAY 2007 EXAM

EXAM NOS. 05000327/2007301
AND 05000328/2007301

APRIL 9 - 11, 2007 AND
MAY 9, 2007 (written)

- ✓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 - 5-7-2007 [] ✓
AND 2-23-2007

Facility: SEQUOIAHDate of Examination: APRIL 2007Developed by: Written - Facility ☒ NRC ☐ // Operating - Facility ☒ NRC ☐

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	MTB 11/07/2006
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	MTB 11/09/2006
-120	3. Facility contact briefed on security and other requirements (C.2.c)	MTB 11/07/2006
-120	4. Corporate notification letter sent (C.2.d)	MTB 11/07/2006
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	MTB 03/23/2007
{-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)	MTB 02/02/2007
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	MTB 02/02/2007
{-45}	8. Proposed examinations (including written, walk-through JPMs, and scenarios, as applicable), supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, and ES-401-6, and any Form ES-201-3 updates), and reference materials due (C.1.e, f, g and h; C.3.d)	OP MTB 02/14/2007 W 03/23/2007
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	MTB 03/09/2007
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	MTB 03/23/2007
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	OP 03/08/2007 MTB W 04/18/2007 MTB
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	OP 03/23/2007 MTB W 05/03/2007 MTB
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	OP 04/05/2007 MTB W 05/08/2007 MTB
-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)	OP 04/05/2007 MTB W 04/04/2007 MTB
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	03/20/2007 MTB
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	04/04/2007 MTB

* 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.

ES-201

Examination Outline Quality Checklist

Form ES-201-2

Facility:		Date of Examination:		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	RHE	TR	MBS
	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.	RHE	TR	MBS
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	RHE	TR	MBS
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	RHE	TR	MBS
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.			
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity, and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s), and that scenarios will not be repeated on subsequent days.			
	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.			
3. W / T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form (3) no tasks are duplicated from the applicants' audit test(s) (4) the number of new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.			
	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			
	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.			
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	RHE	TR	MBS
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	RHE	TR	MBS
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	RHE	TR	MBS
	d. Check for duplication and overlap among exam sections.	RHE	TR	MBS
	e. Check the entire exam for balance of coverage.	RHE	TR	MBS
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	RHE	TR	MBS
a. Author		Printed Name/Signature		Date
b. Facility Reviewer (*)		RANOLAH H. EVANS / RHE		5/17/07
c. NRC Chief Examiner (#)		Thomas D. Wallace / TDR		5/17/07
d. NRC Supervisor		MARK A. BATES / MAB		5/17/07
		Robert HAAK / RHA		5/18/07
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.				

ES-201

Examination Outline Quality Checklist
Rev Final

Form ES-201-2

Facility:		Sequoyah 1 & 2		Date of Examination:		4/9/2007	
Item	Task Description	Initials					
		a	b*	c#			
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.						
	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.						
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.						
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.						
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	RHE	AKR	MB			
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s), and scenarios will not be repeated on subsequent days.	RHE	AKR	MB			
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	RHE	AKR	MB			
3. 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.	RHE	AKR	MB			
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form (2) at least one task is new or significantly modified (3) no more than one task is repeated from the last two NRC licensing examinations	RHE	AKR	MB			
	c. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	RHE	AKR	MB			
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	RHE	AKR	MB			
	b. Assess whether the 10CFR 55.41/43 and 55.45 sampling is appropriate.	RHE	AKR	MB			
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	RHE	AKR	MB			
	d. Check for duplication and overlap among exam sections.	RHE	AKR	MB			
	e. Check the entire exam for balance of coverage.	RHE	AKR	MB			
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	RHE	AKR	MB			
Printed Name / Signature		Date					
a. Author	R. ADOLPH H. EVANS / R. H. Evans	3/28/07					
b. Facility Reviewer (*)	MICHAEL WILSON REESE / Michael Wilson Reese	3/29/2007					
c. NRC Chief Examiner (#)	MARK A. BATES / Mark A. Bates	04/04/2007					
d. NRC Supervisor	RICHARD S. BRUNN / Richard S. Brunn	04/05/07					
NOTE: # Independent NRC reviewer initial items in Column "c", chief examiner concurrence required.							

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ES-201

Examination Security Agreement

Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/19-4/20/07 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 4/19-5/19/07. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
Michael Wilson Reese	Facility Reviewer/Author	Michael Wilson Reese	1/9/2007	Michael Wilson Reese	5/25/2007
X Exam Contractor	Security Exam w/ contractor	Mark	11/2/2007	5/25/2007	5/25/2007
Thomas O Wallace	Training w/ Facility Reviewer	Thomas O Wallace	11/2/07	5/25/2007	5/25/2007
Ronovon H Evans	Instructor / Facility Reviewer	Ronovon H Evans	11/2/07	5/25/2007	5/25/2007
James D. Knight	Simulator Software Eng	James D. Knight	11/2/07	5/25/2007	5/25/2007
Dale G. Kaylitz	Simulator Test Engineer	Dale G. Kaylitz	11/2/07	5/25/2007	5/25/2007
David E. Pritchard	Simulator Manager	David E. Pritchard	11/2/07	5/25/2007	5/25/2007
NORMAN GOOD	Simulator ENGINEER	NORMAN GOOD	11/2/07	5/25/2007	5/25/2007
Debbie TEALUS	Simulator SR	Debbie TEALUS	11/2/07	5/25/2007	5/25/2007
DAVID A. SMITH	RO	DAVID A. SMITH	11/2/07	5/25/2007	5/25/2007
DAVID LUK	RO	DAVID LUK	11/2/07	5/25/2007	5/25/2007
KEVIN A SKAAN	RO	KEVIN A SKAAN	11/2/07	5/25/2007	5/25/2007
James V Lyon	SR RPT Instructor	James V Lyon	11/2/07	5/25/2007	5/25/2007
WILLIAM LEACH	SR RPT Instructor	WILLIAM LEACH	11/2/07	5/25/2007	5/25/2007
Michael D McDaniel	RO	Michael D McDaniel	11/2/07	5/25/2007	5/25/2007

NOTES:

* Written Exam delayed, Administered 5/19/07; this agreement covers that delayed period for development / validation / administration
5/22/07

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Form ES-601-1

Examination Security Agreement

ES-601

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC requalification examinations scheduled for the week(s) of 4/9-20/07 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's chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those operators scheduled to be administered these examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC's 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 requalification examinations administered during the week(s) of 4/9-5/1/07. 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 operators who were administered these examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE
1. Cecil E. Dyer	SRO - US	Cecil E. Dyer	02-15-07	Cecil E. Dyer	05-08-07
2. DAVID J. EPPERSON	US/SRO	[Signature]	2-15-07	[Signature]	5-15-07
3. Thomas B. Marshall	US/SRO	[Signature]	2-16-07	[Signature]	5/15/07
4. Chris T. Brooks	RO	Chris Brooks	2-18-07	Chris Brooks	5/15/07
5. Chris A. Reeves	US/SRO	Chris A. Reeves	2-19-07	Chris A. Reeves	5-11-07
6. Keith Rekus	ADM	[Signature]	2-21-07	[Signature]	5-18-07
7. Gary Sanders	US/SRO	[Signature]	2-22-07	[Signature]	5-18/07
8. Walter Harniss	US/SRO	[Signature]	2-22-07	[Signature]	5/18/07
9. James B. Johnson	US/SRO	[Signature]	2/22/07	[Signature]	5/18/07
10. Larry W. Truett	U.S. / STA	[Signature]	2/22/07	[Signature]	5-18-07
11. Anthony A. Talley	US/SRO	[Signature]	2/22/07	[Signature]	5/18/07
12. Gregory S. Kottet	Developer	[Signature]	3/5/07	[Signature]	5/24/07
13. Gary D. Grewer	US/SRO	[Signature]	3/6/07	[Signature]	5/24/07
14. David Williams	RO	[Signature]	3/6/07	[Signature]	5/24/07
15. Lewis U. Jones	UO/RO	[Signature]	3-8-07	[Signature]	5-21-07

NOTES: SEE pg 1 of 3 note
4/28/07

pg 3 of 3

Examination Security Agreement

ES-601

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC requalification examinations scheduled for the week(s) of 4/9-20/2007 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's chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those operators scheduled to be administered these examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC's 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 requalification examinations administered during the week(s) of 4/9-20/2007. 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 operators who were administered these examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE
1. Randy Ellison	RO	<i>[Signature]</i>	3/16/07	<i>[Signature]</i>	3/19/07
2. Michael L. Piascecki	RO	<i>[Signature]</i>	3/19/07	<i>[Signature]</i>	3/19/07
3. DAVID A. PORTER	SRO	<i>[Signature]</i>	3/19/07	<i>[Signature]</i>	3/19/07
4. James N. Silen	RO	<i>[Signature]</i>	3/19/07	<i>[Signature]</i>	3/19/07
5. PAUL SIMMONS	SRO	<i>[Signature]</i>	3/20/07	<i>[Signature]</i>	3/20/07
6. Lawrence W. Lee	RO	<i>[Signature]</i>	3/20/07	<i>[Signature]</i>	3/20/07
7. ESCOE G. HANMAN	NRC LEAD	<i>[Signature]</i>	3/20/07	<i>[Signature]</i>	3/20/07
8. Mark D. Lackey	Instructor	<i>[Signature]</i>	3/20/07	<i>[Signature]</i>	3/20/07
9. Lynn M. Stephens	IS Desktop Specialist	<i>[Signature]</i>	4/16/07	<i>[Signature]</i>	5/24/07
10. John B. RUDEN	INSTRUCTION	<i>[Signature]</i>	4/20/07	<i>[Signature]</i>	5/9/07
11. JAGUEL W. JOHNSON	UO/RO	<i>[Signature]</i>	4/30/07	<i>[Signature]</i>	5/11/07
12. William J. Reilly	SM/SRO	<i>[Signature]</i>	5-4-07	<i>[Signature]</i>	5/16/07
13. James P. Roach	Instructor	<i>[Signature]</i>	5/8/07	<i>[Signature]</i>	5/8/07
14.					
15.					

NOTES: * SEE pg 1 of 3 note
 ** Mr. Piascecki is no longer employed at TVA.
 5/22/07
 5/25/2007

Sheet 3 of 5

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4/9/2007 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 4/7/2007. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. <u>Mark Palmer</u>	<u>Ops Manager</u>	<u>[Signature]</u>	<u>4/9/07</u>	<u>[Signature]</u>	<u>4/12/07</u>	
2. <u>James P. Kearney</u>	<u>Ops Instructor</u>	<u>[Signature]</u>	<u>4/9/07</u>	<u>[Signature]</u>	<u>4/13/07</u>	
3. <u>[Signature]</u>	<u>Ops Manager</u>	<u>[Signature]</u>	<u>4-10-07</u>	<u>[Signature]</u>	<u>4-12-07</u>	
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NOTES:

sheet 4 of 5

Fig 1 of 1

SEQUOIAH 2007

ES-201

Examination Security Agreement

Form ES-201-3

FROM : SEQUOIAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Jan. 18 2007 11:37 AM

Sheet 5 of 5

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 1/18 to 1/22/07 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 (e.g., acting as a simulator booth operator or communicator) is acceptable if the individual does not select the training content or provide direct or indirect feedback. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 1/18-1/22/07. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. JOSEPH ARSENAULT	AUTHOR	<i>Joseph Arsenault</i>	1/18/07	<i>Joseph Arsenault</i>	1/23/07	
2. Michael Allen Ross	Facility Manager	<i>Michael Allen Ross</i>	1/18/07	<i>Michael Allen Ross</i>	1/23/07	
3. Jacqueline Schelky	Admin	<i>Jacqueline Schelky</i>	1/18/07	<i>Jacqueline Schelky</i>	1/23/07	
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NOTES:

NUREG-1021, Revision 9

ES-301

Administrative Topics Outline
Rev Final

Form ES-301-1

Facility:	Sequoyah 1 & 2	Date of Examination:	4/9/07
Examination Level (circle one):	SRO	Operating Test Number:	NRC

Administrative Topic (see Note)	Type Code*	Describe activity to be performed	
Conduct of Operations	N, R	2.1.4 (3.4)	Knowledge of shift staffing requirements
		JPM:	Determine overtime requirements
Conduct of Operations	N, S	2.1.25 (3.1)	Ability to obtain and interpret station reference materials such as graphs, nomographs, and tables which contain performance data
		JPM:	Determine Main Turbine loading and acceleration rate
Equipment Control	N, R	2.2.21 (3.5)	Knowledge of Pre and Post Maintenance Operability Requirements
		JPM:	Evaluate Equipment operability for mode change following a Post Maintenance Test
Radiation Control	N, R	2.3.2 (2.9)	Knowledge of facility ALARA program
		JPM:	Determine Stay Time
Emergency Plan	N, R	2.4.41 (4.1)	Knowledge of Emergency Action Level thresholds and classifications
		JPM:	Evaluate change in conditions for Emergency Classification upgrade

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
- Class(R)oom
- (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

SRO Admin JPM Summary

- A1a Applicant will determine whether a call-in violates overtime requirements, and will complete the documentation for exceeding overtime limits. This is a new JPM
- A1b The applicant will determine Main Turbine loading and acceleration rate using Turbine temperature information available in the simulator, curves available in plant procedures, and calculations. This is a new JPM.
- A2 Applying TS 3.0.4, applicant will determine whether a mode change from Mode 5 to Mode 4 may be made based on information available about TS required equipment. (Containment Spray) This is a new JPM.
- A3 Given a task to perform in the RCA, an RWP, survey maps, and an alarming dosimeter, the applicant will be required to determine maximum stay time prior to receiving a dosimeter alarm. This is a new JPM.
- A4 Given a situation in the E-Plan, evaluate additional conditions to determine if a classification upgrade is required. (Upgrade from an NOUE to a SAE) This is a new JPM.

ES-301

Control Room/In-Plant Systems Outline
Rev Final

FINAL - OP TEST ONLY

Form ES-301-2

Facility:	Sequoyah 1 & 2	Date of Examination:	4/07
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.	001 Rod Control Withdraw rods to raise power – Block SR High Flux Trips	S, N, A, L	1
b.	064 Emergency Diesel Generator Load Test 1B-B EDG – Low Oil Pressure (ESF) (JPM 077 2AP)	D, A, S	6
c.	072 Area Radiation Monitoring Respond to High Radiation – Control Room Isolation (JPM 153)	D, S	7
d.	006 ECCS Transfer to Hot Leg Recirc (JPM 013 AP1)	D, A, S	2
e.	007 PRT Return PRT Condition to Normal (JPM 036)	D, S	5
f.	076 Service Water Respond to ERCW Pump Trip (JPM 115 2AP)	D, A, S	4S
g.	010 PZR Pressure Control Respond to a stuck open spray valve in ES-0.1	N, A, S	3
In-Plant Systems® (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)			
i.	004 CVCS Local Control of Charging flow (JPM 80)	D, R	2
j.	078 Instrument Air Respond to Loss of Control Air system (JPM 96)	D, E	8
k.	035 Steam Generator Control SG PORVs from Aux Control Room (JPM 66)	D, E	4S
@ 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	

ES-301

Control Room/In-Plant Systems Outline

Form ES-301-2

Rev Final

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

JPM Summary

- JPM A Reactor Startup, critical at a power just prior to SR Trip block. Applicant will withdraw rods to get a stable SUR at some value <0.5 DPM and block SR Trips when required. On second rod withdrawal, a continuous rod withdrawal will result, requiring the reactor to be tripped (Rods cannot be stopped in any mode). New JPM requiring process control. Also performed by SRO Upgrade applicants as a low power JPM.
- JPM B During a DG load test, a low oil pressure will become apparent, and the DG must be tripped. Bank JPM. Also performed by SRO upgrade applicants as an ESF system.
- JPM C A high radiation alarm will require action to initiate control room isolation. Bank JPM. Also performed by SRO Upgrade applicants.
- JPM D During transfer to Hot Leg Recirculation, a valve failure will require the applicant to perform alternate valve alignment to establish recirculation. PSA significant action; Bank JPM
- JPM E Return PRT conditions to normal after a PORV lifts. Bank JPM
- JPM F ERCW Pump trip response; valve failure requires alternate action. Bank JPM
- JPM G Post-trip plant response, applicant will be required to determine that a spray valve is failed open. After attempting to close the valve, applicants must trip RCPs and energize heaters. New JPM requiring process control.
- JPM I Plant JPM performed in RCA; also performed by SRO Upgrade applicants. Bank JPM
- JPM J Plant JPM performed by all applicants including SRO Upgrades. Emergency/Abnormal task; Bank JPM
- JPM K Plant JPM; Emergency/Abnormal task; Bank JPM

ES-301

Operating Test Quality Checklist
Rev Final

Form ES-301-3

Facility:	Sequoyah 1 & 2	Date of Examination:	4/9/2007	Operating Test Number:	NRC	
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).			RHE	MOR	MAB
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.			RHE	MOR	MAB
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).			RHE	MOR	MAB
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.			RHE	MOR	MAB
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			RHE	MOR	MAB
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 			RHE	MOR	MAB
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.			RHE	MOR	MAB
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.				RHE	MOR	MAB
			Printed Name / Signature		Date	
a.	Author	R. DODD L. EVANS / RHE		3/28/07		
b.	Facility Reviewer (*)	Michael Wilson Reese / Michael Wilson Reese		3/29/2007		
c.	NRC Chief Examiner (#)	MARK A. TATES / Mark A. Tates		04/04/2007		
d.	NRC Supervisor	RICHARD J. BROWN / Richard J. Brown		04/05/07		
NOTE: * The facility signature is not applicable for NRC-developed tests.						
# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.						

ES-301

Simulator Scenario Quality Checklist Rev Final

Form ES-301-4

Facility: Sequoyah 1 & 2 Date of Exam: 4/9/2007 Scenario Numbers: 1,2,3,4 Operating Test No.: NRC

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.				RHE	AKR	MB				
2.	The scenarios consist mostly of related events.				RHE	AKR	MB				
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) 				RHE	AKR	MB				
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.				RHE	AKR	MB				
5.	The events are valid with regard to physics and thermodynamics.				RHE	AKR	MB				
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.				RHE	AKR	MB				
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints.				RHE	AKR	MB				
8.	The simulator modeling is not altered.				RHE	AKR	MB				
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.				RHE	AKR	MB				
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.				RHE	AKR	MB				
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).				RHE	AKR	MB				
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).				RHE	AKR	MB				
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.				RHE	AKR	MB				
Target Quantitative Attributes (Per Scenario; See Section D.5.d)					Actual Attributes						
					1	2	3	4	-	-	-
1.	Total malfunctions (5-8)				7	7	7	8	RHE	AKR	MB
2.	Malfunctions after EOP entry (1-2)				2	2	3	3	RHE	AKR	MB
3.	Abnormal events (2-4)				4	4	2	3	RHE	AKR	MB
4.	Major transients (1-2)				1	1	1	2	RHE	AKR	MB
5.	EOPs entered/requiring substantive actions (1-2)				1	1	1	1	RHE	AKR	MB
6.	EOP contingencies requiring substantive actions (0-2)				1	0	1	0	RHE	AKR	MB
7.	Critical tasks (2-3)				2 ³	2	2	3	RHE	AKR	MB

ES-301

Transient and Event Checklist
Rev Final

FINAL OP TEST

Form ES-301-5

Facility:		Sequoyah 1 & 2		Date of Exam:		4/9/2007		Operating Test No.:		NRC							
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M(*)		
		1			2			3			4						
		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		R	I	U
SROU-1	RX													0	1	1	0
	NOR	1												1	1	1	1
	I/C	2,5												4	4	4	2
	MAJ	6												1	2	2	1
	TS	2,5												2	0	2	2
SROI-1	RX		1											1	1	1	0
	NOR													0	1	1	1
	I/C		2,5					1,3, 4						5	4	4	2
	MAJ		6					5,8						3	2	2	1
	TS							1,2, 3						3	0	2	2
SROI-2	RX													0	1	1	0
	NOR													0	1	1	1
	I/C							1,3, 4		2,3, 4,5				7	4	4	2
	MAJ							5,8		7,8				4	2	2	1
	TS									2,6,				2	0	2	2

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.

This matrix assumes that Scenario 2 is used as the spare. If scenario 2 is used in combination with any other scenario, the minimum requirements are still met for each applicant.

ES-301

Competencies Checklist
Rev Final

FINAL - GP TEST

Form ES-301-6

Facility: Sequoyah		Date of Examination: 4/9/07		Operating Test No. NRC 1-4								
Competencies	SRO				RO (OATC)				BOP/CRO			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	2-8	2-8	1, 3-8	2-10	2,5,6,7	2,4,5,6,7	1,3,4,5,7	2,3,5,7,8,10	3,4,6,8	3,4,5,6,8	3,4,5,6,8	4,5,7,9
Comply With and Use Procedures (1)	ALL	ALL	ALL	ALL	1,2,4,5,6,7	2,4,5,6,7	1,3,4,5,7	1,2,3,7,8,9,10	1,3,4,6,8	1,3,4,5,6,8	3,4,5,6,8	4,5,7,9
Operate Control Boards (2)	N/A	N/A	N/A	N/A	1,2,4,5,6,7	2,4,5,6,7	1,3,4,5,7	1,2,3,10	1,3,4,8	1,3,4,5,6,8	3,4,6,8	4,5,7,9
Communicate and Interact	ALL	ALL	ALL	ALL	1,2,4,5,6,7	2,4,5,6,7	1,3,4,5,7	1,2,3,5,7,8,9,10	1,3,4,6,8	1,3,4,5,6,8	3,4,5,6,8	4,5,7,8,9
Demonstrate Supervisory Ability (3)	ALL	ALL	ALL	ALL	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Comply With and Use Tech. Specs. (3)	2,5	2,3,4	1,2,3	2,6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

Instructions:

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.

ES-401

Written Examination Quality Checklist

Form ES-401-6

Facility: Sequoyah		Date of Exam: 4/2007		Exam Level:	RO/SRO																																				
Item Description				Initial																																					
				a	b*	c#																																			
1.	Questions and answers technically accurate and applicable to facility.			OK	RHE	MB																																			
2.	a. NRC K/As referenced for all questions. b. Facility learning objectives referenced as available.			OK	RHE	MB																																			
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401			OK	RHE	MB																																			
4.	The sampling process was random and systematic. (If more than 4 RO and 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL Program Office)			OK	RHE	MB																																			
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: _____ the audit exam was systematically and randomly developed, or _____ the audit exam was completed before the license exam was started, or _____ the examinations were developed independently, or <u>XX</u> the licensee certifies that there is no duplication, or other (explain)			OK	RHE	MB																																			
6.	Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right. (Actual #)	Bank 37/6	Modified 2 / 2	New 36/17	OK	RHE	MB																																		
7.	Between 50 and 60 percent of the question 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 (Actual #)	Memory 37 / 5 ✓	CIA 38 / 20 ✓		OK	RHE	MB																																		
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.			OK	RHE	MB																																			
9.	Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.			OK	RHE	MB																																			
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.			OK	RHE	MB																																			
11.	The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet.			OK	RHE	MB																																			
<table border="0"> <tr> <td colspan="4">Printed Name / Signature</td> <td colspan="3">Date</td> </tr> <tr> <td>a.</td> <td>Author</td> <td>Joseph G. Arsenault</td> <td><i>Joseph G. Arsenault</i></td> <td colspan="3">5/4/2007</td> </tr> <tr> <td>b.</td> <td>Facility Reviewer (*)</td> <td>RANDOLPH H. EVANS</td> <td><i>RH Evans</i></td> <td colspan="3">5/7/07</td> </tr> <tr> <td>c.</td> <td>NRC Chief Examiner (#)</td> <td>MARK A. BATES</td> <td><i>Mark A. Bates</i></td> <td colspan="3">5/7/2007</td> </tr> <tr> <td>d.</td> <td>NRC Regional Supervisor</td> <td>Robert HAAG</td> <td><i>Robert Haag</i></td> <td colspan="3">5/8/07</td> </tr> </table>							Printed Name / Signature				Date			a.	Author	Joseph G. Arsenault	<i>Joseph G. Arsenault</i>	5/4/2007			b.	Facility Reviewer (*)	RANDOLPH H. EVANS	<i>RH Evans</i>	5/7/07			c.	NRC Chief Examiner (#)	MARK A. BATES	<i>Mark A. Bates</i>	5/7/2007			d.	NRC Regional Supervisor	Robert HAAG	<i>Robert Haag</i>	5/8/07		
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d.	NRC Regional Supervisor	Robert HAAG	<i>Robert Haag</i>	5/8/07																																					
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			6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia #/ units		

Instructions

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

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

General comment. There must be consistency between the RO and SRO exam on the various aspects of procedure usage that are SRO-only required knowledge.													
General comment. When a modified or bank question is used, the original version of the question should be supplied with the exam reference material.													
General comment. A question from any exam bank, even exam banks at other facilities, is considered to be a bank question – likewise for modified questions.													
General comment. Be consistent with punctuation (periods) at the end of each bullet when there is a list of items in the stem of the question.													
General comment. The question numbers on the tabs in the draft submittal do not always match the question numbers on the exam that was submitted.													
General comment. When a reference is to be provided to the applicant, then "REFERENCE PROVIDED" should be stated as a note to the applicant.													
General comment. When a reference is to be provided to the applicant, those pages should be specifically called out in the feedback section the applicable question.													

FINAL
After all
Comments
incorporated.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units		

RO EXAM

1	H	I-2												001AA2.04 (BANK) Add to the stem that reactor power has just reached 90% after a linear power ascension from 50% over the last three hours. This will put them in a position where Xe is decreasing, thereby adding positive reactivity, the same as the withdrawing rod. This may help the plausibility of some of the distractors. Discuss the following modification with the licensee. Licensee incorporated the comment, but used four hours instead of three hours because that was a more realistic power ascension rate. MAB 04/25/2007 Given the following conditions: - Reactor power has just reached 90% after a linear power ascension from 50% over the last three hours. - An inadvertent control rod withdrawal occurs on a centrally located control rod. The licensee used CONTROL BANK D WITHDRAWAL vice a single rod. This should be OK. MAB 04/25/2007 Which ONE of the following correctly describes the initial plant response: A. Power decreases AND OT Delta T Setpoint decreases B. Power decreases AND OT Delta T Setpoint increases C. Power increases AND OT Delta T Setpoint decreases D. Power increases AND OT Delta T Setpoint increases Incorporated. The Xe effects should add a little plausibility to the power decrease piece of the answer choices. MAB 04/25/2007. THIS QUESTION IS NOW SATISFACTORY. MAB 04/25/2007
2	F	I-2				x								001K2.03 (NEW) "C" and "D" may not be plausible. I was not able to find

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws			4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia			#/ units
												reference material, either supplied with the question, or through searches of my own, that would lend credibility to these two distractors. Discuss plausibility with licensee. Plausibility requires more than just knowing that the rod control logic cabinet uses DC. One possible solution would be to add a second part to "A" and "B" and iterate on how the power is transformed and to what dc voltage they are transformed. Discuss alternatives with licensee. Licensee supplied references and enhanced distractor analysis to better explain plausibility. OK MAB 04/30/2007 LOD is influenced by distractor credibility. Licensee is going to supply reference to support plausibility of "D". If the reference supports plausibility, then this question will be satisfactory. MAB 04/25/2007 THIS QUESTION IS NOW SATISFACTORY. MAB 04/30/2007
3	F	2	x								U S	003K4.04 (NEW) Question should be worded as follows: On a loss of CCS to an RCP thermal barrier heat exchanger, which ONE of the following contains parameters that indicate proper seal injection in accordance with AOP-M.03? THIS COMMENT STILL NEEDS TO BE INCORPORATED. Incorporated. MAB 04/25/2007 The suggested wording (above) ties the correct answer directly to the procedure wording. Incorporated. MAB 04/25/2007 What procedure background information supports that "proper seal injection" guarantees adequate cooling of RCP motor and seals? Does a more direct indication of adequate cooling need to be examined in order to meet the K/A? Licensee needs to supply appropriate reference material to support the K/A match, or modify the question to more directly test indications of adequate cooling of RCP motor and seals. Discuss this comment with the licensee prior to having them take action. Proper Seal Injection is a close

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Backward
													enough link since its purpose is to cool the seals. Incorporated. MAB 04/25/2007
													There is no justification documented for plausibility. Why are any of these distractors plausible? Are there any references that can be supplied to justify why the numbers being used in the distractors would be meaningful to the operators? For instance, what is the normal procedural operating band for VCT temperature, or the normal operating band for seal injection? Would these values relate to any of the distractors to add credibility? REFERENCE MATERIAL WAS SUPPLIED. Newly supplied reference material supports plausibility. MAB 04/25/2007
													"D" is potentially a correct answer. Can "D" be argued as correct? More flow at a lower VCT temperature would provide more cooling. Even if the flow rate is slightly outside the AOP procedural band, the cooling could conceivably be adequate. There is no lower AOP procedural limit on VCT temperature, so one could argue that 14 gpm at 125F may provide the same cooling as 12 gpm at 120F. The above suggested wording of the question may eliminate this concern. Discuss this with the licensee. FIRST COMMENT MUST BE INCORPORATED TO CORRECT THIS ISSUE. First comment was incorporated, therefore this issue is resolved. MAB 04/25/2007.
													Change 5 gpm to 6 gpm. Incorporated. MAB 04/25/2007
													Change 128F to 130F. Not incorporated. OK anyway. MAB 04/25/2007
													THIS QUESTION IS NOW SATISFACTORY. MAB 04/25/2007
4	H	2									x	U S	004A2.03 ((NEW) Typo: "downstream" STILL NEEDS TO BE FIXED. Incorporated. MAB 04/25/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													Change the wording of the fourth bullet to provide an instrument number, rather than a description of where the TI is located. If the plant procedures have a noun name for the TI or if a name is provided on the CR panels, then that exact description should be allowed along with the TI number. REFERENCE MATERIAL SUPPLIED HAS A CHARGING TEMP HIGHLIGHTED. P&ID SUPPLIED SHOWS THE CHARGING TEMP AND HAS IT HIGHLIGHTED. THE QUESTION STEM DISCUSSES LETDOWN TEMP DOWNSTREAM OF THE HX. WHAT INSTRUMENT NAME AND NUMBER SHOULD BE USED FOR THE LETDOWN TEMPERATURE? 1-TI-62-71, REGEN HX OUTLET TEMP – LETDOWN? I NEED TO SEE A P&ID SHOWING THIS TI IN RELATION TO THE L/D HX. Licensee did not address this comment in its entirety when they were in the office. They made the corrections to the exam question, but did not supply the references to verify the correct location of TI-62-71. Licensee still must supply this reference. IF REFERENCE MATERIAL CHECKS OUT, THEN THIS QUESTION WILL BE SAT. MAB 04/25/2007. Reference Material is OK. MAB 04/30/2007
													No reference was provided to verify that the normal charging value is 87 gpm. This must be provided for the examiner to properly validate the question. REFERENCE MATERIAL HAS NOW BEEN SUPPLIED. – OK OK MAB 04/25/2007
													The licensee did not attach the pages of the procedure to the exam question to allow the NRC reviewer to validate the correct answer. Only page 4 of 58 of AOP-R.05 was included in the exam submittal. This is not enough to verify that Isolating Charging & L/D is the correct procedural direction. Is this procedural direction provided in the EOP network? Are the operators required to trip the plant in accordance with the AOP? What procedure step has the operators perform the isolation and what procedure path was taken to place the operators at that step? PROCEDURES NOW ATTACHED. ISOLATION OF CHARGING AND LETDOWN IS THE CORRECT ACTION. OK MAB 04/25/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													No Tech Specs were supplied. I assume that TS Leakage limits are 1 gpm and 10 gpm, but the licensee needs to supply all the necessary reference material for validation of the exam. TS NOW SUPPLIED. - OK TS removed from answer choices. - OK MAB 04/25/2007
													What Boundary Isolation Valve downstream of the Regen Heat Exchanger is leaking? No documentation was presented in the exam submittal to allow for verification that there is a potential for leakage through a boundary isolation valve. This documentation needs to be provided and referenced in order to verify that the K/A is being tested. P&ID HAS NOW BEEN PROVIDED ATTACHED - OK. OK MAB 04/25/2007
													Distractor "A": Everything past the first two sentences does nothing to differentiate this answer choice from the other answer choices. STILL NEEDS TO BE INCORPORATED. OK MAB 04/25/2007
													Distractor "C": Everything past the first two sentences does nothing to differentiate this answer choice from the other answer choices. STILL NEEDS TO BE INCORPORATED. OK MAB 04/25/2007
													Distractor "D": Everything past the first two sentences does nothing to differentiate this answer choice from the other answer choices. STILL NEEDS TO BE INCORPORATED. OK MAB 04/25/2007
													K/A Not Matched: The above three comments cause the question to NOT test the K/A. If the applicant can diagnose where the leak is and know that the TS limit is violated, the applicant can arrive at the correct answer without ever knowing how to use procedures to correct, control, or mitigate the consequences of the malfunction. Corrected by virtue of incorporating the above comments. OK MAB 04/25/2007
													Change charging fow in the stem to 92 gpm. Discuss with licensee. This adds plausibility to distracters because it

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
5	H	1-2?											requires them to know the difference between unidentified and identified RCS leakage. Charging flow was changed, but this comment lost its meaning when the licensee decided to delete the TS portion of the answer choices. OK MAB 04/25/2007 IF REFERENCE MATERIAL CHECKS OUT, THEN THIS QUESTION WILL BE SAT. MAB 04/25/2007. THIS QUESTION IS NOW SATISFACTORY. MAB 04/30/2007
													005A1.01 (NEW) Question does not test the required knowledge of the K/A. The K/A requires testing knowledge of predicting or monitoring heatup and cooldown rates as they apply to "prevent exceeding design limits." COMMENT STILL NEEDS TO BE RESOLVED - DESIGN LIMIT KNOWLEDGE IS NOT BEING TESTED. Question was not changed prior to the 4/23 office visits. Therefore, the question still does not match the K/A. MAB 04/25/2007. Is this actually a NEW question? If this question has been used in its current, or modified, form at another facility, then it is not new. Licensee did not address this during their office visit because the question, as presented does not match the K/A. MAB 04/25/2007. No reference material was provided to allow the NRC reviewer to validate the location of the flow indicator. A description from a slide presentation was provided, but this does not discuss anything about a flow indicator. Verifying the location of this flow indicator is essential to validating the question. REFERENCE MATERIAL HAS NOW BEEN SUPPLIED. LOCATION OF THE FI IS OK. OK MAB 04/25/2007 LOD is borderline with respect to discriminating at the appropriate level for a licensed operator. Consider failing the power supply to the bypass valve flow controller, which may force more water through the heat exchanger.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward			Q= K/A
														Consider incorporating cooldown data in the stem. Maybe these items could be used together in some way to challenge or exceed an RCS cooldown rate limit as defined in Tech Specs and allow the question to match the K/A. Comments not address yet. MAB 04/25/2007
														In the stem, use actual plant instrument numbers and instrument descriptions as they appear on the control panels. Comment not addressed yet. MAB 04/25/2007.
														Have the licensee explain how indicated RHR flow REMAINS CONSTANT is plausible. If this is not plausible, then it will need to be corrected. Comment not addressed yet. MAB 04/25/2007.
														K/A MATCH AND DISTRACTOR PLAUSIBILITY STILL NEEDS TO BE ADDRESSED. MAB 04/25/2007.
														THIS QUESTION WILL BE SAT IF IT STATES THAT RHR IS BEING PLACED IN SERVICE IAW A SPECIFIC SECTION. MAB 05/02/2007. ADDED – MAB 05/04/2007
														THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
6	F	2										S	005AA2.02 (NEW)	This question is Satisfactory.
														THIS QUESTION IS NOW SATISFACTORY. MAB 04/25/2007
7	H	2										E	005K1.01 (NEW)	Third Bullet in the stem: Change to: Step 11 (DETERMINE if RHR pumps should be stopped) of E-1, Loss of Reactor or Secondary Coolant, is in progress. Comment incorporated. MAB 04/25/2007
												S		Delete the information in the last part of each answer

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws			4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia			#/ units
8	H	4 2		x		x						choice that is not needed to differentiate between distractors. Answer Choices should read: A. Immediately Pull-to-lock. B. Open Exchanger. C. Transition Recirc. D. Reset Auto. Comment incorporated. MAB 04/25/2007 THIS QUESTION IS NOW SATISFACTORY. MAB 04/25/2007 006A3.01 (NEW) Wording needs corrected in question part of the stem: add an "of". OK – corrected by end of IP. OK MAB 04/25/2007 Distractors "C" and "D" are not plausible. Knowing that SI flow increases with decreasing RCS P does not discriminate at the appropriate level. SI flow has been removed. MAB 04/25/2007 Distractor "C" and Answer "B" contain overlap (Cues) from question 005K1.01. The applicant can determine that RHR flow is supposed to be zero at an RCS P of 350# and then apply this knowledge directly to this question and conclude that RHR flow will be zero at 450#. Flow removed from 005K1.01. MAB 04/25/2007. None of the iterations on accum level are credible. More information needs to be added to the stem in order to add credibility to the distractors. Plant cooldown was added, which adds credibility because the accumulators will be isolated when going from hot standby to cold shutdown. MAB 04/25/2007 A more meaningful question may be to place them in the GOPs at a point where accumulators have been manually isolated – then give them a LOCA. Then you would have credibility in an iteration on Accum level stable or lowering. Lowering accum level would be credible

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													because the applicant would need to understand that when they get to a certain spot in the procedure that accumulators have already been isolated. This would address credibility for accum level changes. A plant cooldown was added to address this comment. MAB 04/25/2007
													Why are three variables appearing in the answer choices when only two of these variables are required to develop four distinct answer choices? Only variables that are needed to make the answer choices unique should be used. Two variables now being used. MAB 04/25/2007
													LOD = 1 is directly related to the above comments. Resolution of other comments addressed this issue. MAB 04/25/2007
													THIS QUESTION IS NOW SATISFACTORY. MAB 04/25/2007
9	H	2	x			x						U S	006K3.01 (BANK) What is the status of the RCPs? It may be necessary to include the status of the RCPs in the stem. These plant conditions would have prompted the operators to secure RCPs. MAB 04/25/2007 Add the word "All" in front of "CETC's" in third bullet because of Note 2 on page 4 of 16 in FR-0. It may be sensible that one CETC in the core center or in each quadrant are greater than limits, but adding the word "All" should resolve any uncertainty. Incorporated. MAB 04/25/2007 The question seems to intermix Safety Function Status Trees with Tech Spec requirements. The question stem may need to explicitly ask for the status of core cooling in accordance with FR-0 and then ask for the something else for the second half of each question. This is needed because Core cooling being degraded is based on the parameters that FR-0 contains and not what equipment is required by Tech Specs. For example the question could read: "Which ONE of the following correctly states the

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>status of core cooling in accordance with 1-FR-0 AND 'maybe then iterate on another aspect of the question'?' TS items removed and FR-0 added to question portion of the stem. MAB 04/25/2007</p> <p>Distractor "A": Not plausible. It does not make sense that adequate core cooling is maintained with CETCs reading 800F. It does not make any sense that CETCs are going up, yet they are above the minimum RHR flow requirement. Revision addressed this comment. MAB 04/25/2007</p> <p>Distractor "B": Not plausible. It does not make any sense for an Accum to provide injection for a period to <u>maintain</u> core cooling. Accum have a very limited inventory. It also does not make sense that adequate core cooling is maintained with CETCs reading 800F. Revision addressed this comment. MAB 04/25/2007</p> <p>"A" and "B" may be more plausible if they contained "Inadequate" vice "Adequate". Some numbers in the stem may also need to be modified to add credibility to both of these choices. Inadequate and Degraded are now being used. MAB 04/25/2007</p> <p>Change RVLIS Lower Range Level to 40%. Iterate on "Adequate" and "Inadequate" core cooling. Add plausible reasons for all incorrect answers. Licensee decided to change to 55%. OK. MAB 04/25/2007</p> <p>No documentation was provided to support credibility of the distractors. Resolved. MAB 04/25/2007</p> <p>Documentation was not supplied with the draft exam to support whether or not core cooling is degraded. FR-0 is the reference needed to verify if core cooling is inadequate. This reference was not attached or referenced in the question. Now OK. I pulled FR-0 from the references that were supplied. MAB 04/25/2007</p> <p>THERE ARE NOW CONCERNS THAT THERE COULD BE MULTIPLE CORRECT ANSWERS. THE LICENSEE</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				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
													IS GOING TO TAKE ANOTHER LOOK AT IT. I THINK THAT THIS QUESTION CAN BE MADE TO WORK IF THERE IS A STRONG ENOUGH TIE TO FR- 0. MAB 04/25/2007		
10	H	2				x							QUESTION IS NOW SATISFACTORY. ANSWERS ARE TIED DIRECTLY TO FR-0. MAB 04/30/2007.		
													007EAI.08 Change wording of last two distracters: C. MDAFW Pumps are operating. TDAFW pump is off. D. TDAFW pump is operating. MDAFW pump is off. Wording format suggestion incorporated. MAB 04/25/2007 "A" is not plausible. Under what conditions following a reactor trip while online, would AFW not feed SGs? What would it do to the question if power in the stem was lowered to 20%? I am stretching for ideas that could make "A" plausible. AFW would not feed after a trip if Tavg did not drop below 550F. Therefore, "A" is plausible and incorrect with the addition of Tavg in the stem. MAB 04/25/2007 Under what conditions would the TDAFW pump be operating with the MDAFW pumps off. There is nothing in the stem to add complications to make this condition plausible. Discuss with licensee. LICENSEE STILL NEEDS TO ADDRESS THIS FOR PLAUSIBILITY OF "D". MAB 04/25/2007 The stem may need to be enhanced in order for all the distracters to be plausible. LICENSEE STILL NEEDS TO ADDRESS THIS FOR PLAUSIBILITY OF "D". MAB 04/25/2007 Licensee added Tavg to stem because Tavg less than 550F is needed to get the FWI with Rx trip. MAB 04/25/2007 * LICENSEE STILL NEEDS TO ADDRESS PLAUSIBILITY		

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units		
												OF "D". THEY DID NOT ADDRESS THIS COMMENT. MAB 04/25/2007 ADDED EDG INFO TO STEM TO CORRECT PLAUSIBILITY ISSUE ON "D". MAB 05/04/2007 THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
11	H	2				x						007K1.03 (BANK) Distractor "D" is not plausible. "Isolated" does not describe a flowpath. The answer choice does not fit with the question. This distractor must be modified, or the question must be modified to resolve the single non- plausible distractor issue. Discuss with licensee to determine acceptable alternatives. Incorporated. Getting rid of isolated was needed because the flow path is not truly isolated due to RVs discharging. MAB 04/26/2007 It is apparent from the provided reference material that if Seal Return is isolated, then it will relieve to the PRT. No documentation was provided that allow for parameters given in the stem to be linked to Seal Return isolation. This information is necessary for validation of the question. APPROPRIATE REFERENCE MATERIAL HAS NOW BEEN SUPPLIED. – OK See above comment – OK now MAB 04/26/2007 THIS QUESTION IS NOW SATISFACTORY. MAB 04/25/2007
12	H	1-2										008A4.09 (NEW) This K/A does not appear on the sample plan, yet the licensee provided a question for this K/A. I thought that there may be a typo for the K/A number, but I matched the K/A, as stated in the analysis portion of the question, with K/A 008A4.03, but it did not match. Discuss with the licensee. LICENSEE CORRECTED THE SAMPLE PLAN. – OK This was an administrative error by the licensee. MAB 04/26/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Back-ward	Q=K/A
														This question is purely GFE. This exam is the SITE SPECIFIC WRITTEN EXAM. These applicants have already passed the GFE. It is OK to test some GFE concepts in the context of the actual plant – some context that differentiates the question from one that would appear on the GFE exam. Demins were incorporated - OK. MAB 04/26/2007.
														One suggestion to make it plant specific would be to test the effect on letdown isolation (actual plant values – when the high temp alarm annunciates and when letdown would be isolated). This may require the question to be reworked a bit, but this is one angle to make it more plant specific. Consider providing a letdown temp in the stem and iterating the second piece of the answers with “alarm in AND letdown isolated” - OR – “alarm in AND letdown not isolated.” If the alarm annunciates at a lower temperature than the auto isolation, then this will make for good distracters. Consider what this suggestion might do to the first part of each answer. Demins were incorporated - OK. MAB 04/26/2007.
														The second bullet does not add any information that is needed to answer the question. Consider deleting. Discuss with the licensee. Agreed to allow the second bullet. MAB 04/26/2007
														THIS QUESTION IS NOW SATISFACTORY. MAB 04/25/2007
13	F	4				x						U		010K2.03 (NEW)
		2										S		120VAC is not plausible. No documentation was supplied to justify plausibility. See next comment. Incorporation of the following comment would fix this issue as well as the issue discussed below. See updated distractor analysis. Minimally Acceptable MAB 04/30/2007
														Question does not discriminate at the appropriate level for a licensed operator. Modify question to test specific power supplies for the PORVs. Simply knowing whether a power

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward			Q=K/A
14	F	?												supply is DC or AC is not very beneficial to the operator. However, knowing if a specific power supply is lost and how that affects plant equipment and indications is very beneficial. When incorporating this change, plausibility of all answer choices must be evaluated. Incorporating this idea will make the question more operationally valid and increase the LOD to an acceptable level. See updated distractor analysis. Minimally Acceptable MAB 04/30/2007 QUESTION IS MINIMALLY ACCEPTABLE. MAB 04/30/2007
											x		U S	011EK3.14 (BANK) This may be a prime candidate for a K/A replacement. During a Large Break LOCA the core is cooled through the break. It may be possible on a small break LOCA to develop NC conditions, but NC will not occur during a Large Break LOCA. The same is true of reflux boiling. A new K/A was supplied on 04/25/2007. (011EK3.14) MAB 04/26/2007. * NEW QUESTION MUST BE DEVELOPED TO THE NEW K/A. MAB 04/26/2007 REPLACEMENT QUESTION IS SATISFACTORY AS LONG AS THE CONDITIONS IN THE STEM UNEQUIVOCALLY INDICATE A LB VICE SB LOCA. MAB 04/30/2007 CONDITIONS IN THE STEM DO DESCRIBE A LB LOCA. Q IS SATISFACTORY. MAB 04/30/2007
15	H	2											E S	012K1.04 (NEW) Modify wording of "C": "Rod Bottom Lights illuminated; Group Demand indication less than 220 steps." Reason for this change is to not allow someone to interpret 220 steps as being between 220 steps and 0 steps. This change simply strengthens the fact that "C" is meant to be

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>somewhere below 220 steps, thus ensuring that the answer is unique as compared to "D". (Make a similar change to "B") Incorporated. MAB 04/26/2007</p> <p>Why is the first part of "A" and "B" included in these two answer choices? How does Rod Position Indication below 220 steps help to make these two answer choices unique? This needs to be discussed with the licensee. If items in the answer choices are not needed in order for that answer choice to be unique, then that information likely should not be in the answer choice. Extraneous information removed. MAB 04/26/2007</p> <p>THIS QUESTION IS NOW SATISFACTORY. MAB 04/25/2007</p>
16	F	2?				X?							<p>012K2.01 (BANK)</p> <p>More documentation is needed to verify the question. Electrical prints and an explanation would help to verify that 125 VDC Battery Board I feeds MCB indication and Shunt Trip. The provided information states that the Shunt Trip Coil is powered by 125 VDC, but it does not state exactly which bus/board is the source. MORE DOCUMENTATION WAS PROVIDED. - OK</p> <p>Reference supports 125 VDC loads. MAB 04/26/2007</p> <p>Answer choices need to be specific in stating exactly what MCB indication is lost and which indication remains lit. This is important because there are likely other MCB indications that are not affected by a loss of 125 VDC Vital Battery Board I. Reactor Trip Breaker indication now explicitly stated in the stem. MAB 04/26/2007</p> <p>Distractor analysis was incomplete. - ENHANCED OK MAB 04/26/2007</p> <p>Delete the reasons in B and C if they do not help make the answer choices unique. Discuss with the licensee. Incorporated. MAB 04/26/2007</p> <p>THIS QUESTION IS NOW SATISFACTORY. MAB</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Back-ward	Q=K/A
17	H	1-2?				x							04/25/2007	
													013K3.03 (BANK)	
														"A" is not plausible for the exact reason stated in the distractor analysis. Absent any other event except for a dead safety bus, the respective EDG will start and load to the dead safety bus. I suggested to the licensee that they could place developed voltage in the stem and simply test on whether the EDG output breaker closes. - the did not appear to like the idea. LICENSEE STILL NEEDS TO ADDRESS THIS CONCERN. MAB 04/26/2007
														"A" and "B" not plausible: How are "A" and "B" different. If the "A" EDG is running in standby, then the "A" Train loads will not be sequenced onto the Shutdown Boards. Standby at SQ means that the EDG is not running. If the EDG is not running, then the loads will not sequence - so essentially there was no difference between "A" and "B". Licensee change "B" to 1A-A CCP will not sequence on to S/D Board. MAB 04/26/2007
														HAVE LICENSEE WALK ME THROUGH THE REFERENCES FOR THE NEW DISTRACTOR. ALSO ENSURE THAT THE DISTRACTOR ANALYSIS GETS UPDATED. MAB 04/26/2007
														More reference material may be needed for validation of this question. Discuss with the licensee. REFERENCE NEEDED TO BE REVIEWED TO VERIFY NEW "B" ANSWER CHOICE. MAB 04/26/2007
														Have the licensee explain how "C" is plausible. Under what circumstances have the applicants trained on where a single failure prevents only two MSIVs from closing? Would this condition typically only present itself in the presence of an instrumentation power failure? Applicants have seen a similar impact while in the simulator, according to the licensee. See enhanced distractor analysis. MAB 04/26/2007
														Have licensee walk me through the references for

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													verification of the incorrectness of "B" and "C", as well as the validation of the correct answer. "B" has been replaced. "C" is based on condenser availability. - OK MAB 04/26/2007
													A full sized P&ID reduced to fit on an 8.5 x 11 inch sheet is difficult to follow. STILL NEED TO ENSURE QUESTION IS TECHNICALLY ACCURATE. MAB 04/26/2007
													Adding some power supply failures in the stem may help to add plausibility to the distracters that I questioned above. For instance, adding a power supply failure to one of the sequencers and/or safety injection actuation channels, and/or containment pressure channels etc. Discuss with the licensee. Licensee did not initially want to complicate the stem – but they still need to address the plausibility of "A". MAB 04/26/2007
													*
													FOR THIS QUESTION TO BE COMPLETED SAT, THE TECHNICAL ACCURACY NEEDS TO BE VERIFIED AND SOME NEW REFERENCES MAY NEED TO BE SUPPLIED WITH THE QUESTION. ALSO THE LICENSEE NEEDS TO ADDRESS "A" PLAUSIBILITY. MAB 04/26/2007
													QUESTION WILL BE SAT IF THE QUESTION STATES WHICH FAILURE THEY ARE REFERRING TO. I.E. TRAIN "A" SI. MAB 05/02/2007
													ADDED SPECIFIC FAILURE. OK MAB 05/04/2007
													THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
18	F	1-2		X								U	015AA2.10 (MODIFIED)
												S	This answer is partially provided in the stem of question 026G2.4.6. This is not allowed. Changed to "reduction" in CCW flow. OK MAB 04/26/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Back-ward
													This question is written at the fundamental LOK. All the operator must know in order to answer the question is that a loss of CCW has occurred. A memory item on a loss of CCW is trip the reactor and trip RCPs. Question allowed as C/A with incorporated changes. MAB 04/26/2007
													The conditions in the stem – are these the same values for all RCPs? If so, state that in the stem. Incorporated MAB 04/26/2007
													This K/A sets up to write a more discriminating question. One method to accomplish this would be to provide a table of parameters (see beginning of AOP-R.04) that apply to RCP trip criteria. Change the parameters over time and ask for the first moment when a trip criteria is exceeded. Discuss with the licensee. Discussed with licensee. This will only be revisited if needed. MAB 04/26/2007
													THIS QUESTION IS NOW SATISFACTORY. MAB 04/26/2007
19	F	1-2				x						U? S	015K1.08 (NEW) Change bullets to - Unit 1 is in Mode 5 - Operators are preparing for a plant heatup Incorporated. MAB 04/26/2007 A question recently was successfully appealed because none of the answer choices contained a complete set of the minimum requirements. The question must be worded such that any subset of the minimum is an acceptable answer. Maybe adding in accordance with the precautions and limitations of 1-SO-68-2 would be enough to resolve any concerns here. Discuss with licensee. Tied answers directly to P&Ls, which should address the issue. MAB 04/26/2007 Plausibility of “C” and “D”: In order for “C” and “D” to be plausible there must be some plant documentation that discusses cold water accidents.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units		
												Licensee verbally stated the basis and stated that there was documentation on cold water accidents. MAB 04/26/2007
												THIS QUESTION IS NOW SATISFACTORY. MAB 04/26/2007
20	F	2				x					U S	017A4.02 (NEW) Is it possible to enter FR-C.1 with RCPs operating? The answer to this question will affect the plausibility of "A". "A" replaced. OK MAB 04/26/2007 "D" is a subset of "B". Starting one RCP prior to depress is a subset of starting all RCPs prior to subset. If "B" is correct, then "D" would also be correct. NUREG-1021, Appendix E states that there can only be one correct answer, therefore neither of these answer choices are plausible. ENSURE THAT "B" AND "D" ARE NOT THE SAME. MAB 04/26/2007 "C": be specific about what it means for secondary depress to be ineffective. Parallel the words in the procedure. If specific temp of 1200F is used here, it may allow for another distractor to be developed using 700F (potential replacement for "A". Discuss with licensee. Incorporated. MAB 04/26/2007 * LICENSEE'S RO WAS CONCERNED WITH THE NEW "A" - ALL RCPs REMAINIG SHUTDOWN. THIS NEEDS TO BE DISCUSSED/ADDRESSED. ALSO, "B" AND "D" NEED TO BE VERIFIED UNIQUE. MAB 04/26/2007 "B" AND "D" ARE NOW UNIQUE. MAB 05/03/2007 MODIFY "A" TO STATE: "NO RCPs WILL BE STARTED WHILE PERFORMING FR-C.1." MAB 05/02/2007 ADDRESSED BY MODIFYING THE STEM INCONJUNCTION WITH "A". OK MAB 05/04/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward	Q= K/A
21	F	2												THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
												S		022A4.01 (BANK) Licensee needs to walk me through the attached documentation. A full sized P&ID reduced to fit on an 8.5 x 11 inch sheet is difficult to follow. ADDITIONAL REFERENCE MATERIAL SUPPLIED AT END OF IP. – OK Reference supports accuracy of Q. MAB 04/26/2007
22	H	2				x						E S		THIS QUESTION IS NOW SATISFACTORY. MAB 04/26/2007 022AK3.03 (BANK) “A” is not credible at a pressurizer level of 65%. What is the upper limit for pressurizer level? Is there a reactor trip criteria for a certain value of pressurizer level? If so, then the value given in the stem needs to be closer to this value. Changed to 82%. OK MAB 04/26/2007 “D” does not make any sense given that letdown was isolated, pressurizer level is rising, and charging flow is only 40 gpm. “D” replaced. OK MAB 04/26/2007 If “A” can be made more plausible with a small revision to the stem and “D” can be replaced and/or conditions added to the stem to make another plausible distractor, then this question will be satisfactory. Addressed. – OK MAB 04/26/2007
23	H	2										E S		THIS QUESTION IS NOW SATISFACTORY. MAB 04/26/2007 025A2.06 (NEW) Do the answer choices have the actual component number listed, or is the component noun name only stated? For

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													instance, if the bypass valve is being manipulated, then the bypass valve component number needs to be stated in the answer choices. I do not want the applicants to be confused on whether the answer choice is telling them to adjust VLV-61-751 or TCV-61-71. If they are to adjust VLV-61-751, then this valve number and noun name should be stated in the answer choices. Discuss with the licensee. Incorporated. MAB 04/26/2007
													No supporting documentation was supplied to verify that Ice Condenser Door Binding is a concern. REFERENCE MATERIAL PROVIDED AT END OF IP. - OK Reference supports question. OK MAB 04/26/227
													No documentation was supplied to support Excessive Sublimation of the Ice Bed as being incorrect. REFERENCE MATERIAL PROVIDED AT END OF IP. - OK Reference supports question. OK MAB 04/26/227
													No training material, etc. was supplied to verify that throttling the valve closed will produce the desired effect. REFERENCE MATERIAL PROVIDED AT END OF IP. - OK Reference supports question. OK MAB 04/26/227
													This question will be designated as unsat until the appropriate documentation is supplied and a proper review has been completed. REFERENCE MATERIAL REVIEWED AND QUESTION IS NO LONGER DESIGNATED AS UNSAT. Reference supports question. OK MAB 04/26/227
													THIS QUESTION IS NOW SATISFACTORY. MAB 04/26/2007
24	H	2										E	025AK1.01 (BANK)
												S	These equations are used for information only to provided defense indepth (Note in App. U); therefore, to be safe, state in the question for them to calculate time to 200F using 0-GO-15, App. U. I do not want them to use another approved method to perform this calculation and then be able to argue it as correct. Incorporated. MAB 04/26/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													Change the Rx Vessel Water level to a value different than the number of feet stated with a specific equation. (I.E. closer to the value to use a different equation, but due to conservatism, require them to use the equation now being used for this question). The chances of them needing to compute the time to 200F and level being exactly that which matches one of the equations is highly unlikely. Discuss this change with the licensee. THEY WERE GOING TO TRY TO INCORPORATE THIS COMMENT. THEY NEED TO ENSURE THAT THEY HAVE PROPER PROCEDURE GUIDANCE. MAB 04/26/2007 The licensee added information wrt upper internals, which requires another equation. - OK MAB 04/30/2007
													THIS QUESTION IS PURELY COOKBOOK IN ITS CURRENT FORM. THE REFERENCE IS PROVIDED AND THE APPLICANT'S DO NOT NEED TO DO ANYTHING EXCEPT SELECT THE EQUATION THAT EXACTLY MATCHES THE CONDITIONS IN THE STEM AND THEN PLUG A FEW NUMBERS IN. MAB 04/26/2007 The licensee added information wrt upper internals, which requires another equation to be used. - OK MAB 04/30/2007
													VERIFY THAT LICENSEE CHANGED 702 feet to 701 feet. MAB 04/30/2007
													QUESTION IS NOW SATISFACTORY. MAB 05/03/2007
25	F	1-2									X ² X	U ² U S	026AG2.4.6 This question provides cues to aid in answering 015AA2.10. 015AA2.10 revised to a partial loss of CCW. MAB 04/26/2007 Two periods at end of second bullet. Corrected. MAB 04/26/2007 K/A requires testing knowledge of EOP symptom-based mitigation strategy. What symptoms are being evaluated in

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Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													the exam question. I could follow the wire diagram to the point that showed that two contacts needed to be closed for the valve in question to close; however, no material was provided to show what will cause those two contacts to close. ADDITIONAL REFERENCE MATERIAL PROVIDED. - OK. Question was replaced. MAB 04/27/2007 Simply providing a few pages from a lesson plan that state how these interlock work would be enough. LOGIC PRINT PROVIDED - OK Question was replaced. MAB 04/27/2007 Distractor "B" is not plausible: No reference material was provided to support distractor plausibility. Discuss plausibility with the licensee. Reference material provided. 04/30/2007 This question will be designated unsat until a proper review can be performed. QUESTION NO LONGER DESIGNATED AS UNSAT AFTER REVIEW OF ADDITIONAL REFERENCE MATERIAL. Question was replaced. MAB 04/27/2007 AN ENTIRELY NEW QUESTION WAS SUPPLIED ON APRIL 23. THIS NEW Q NEEDS TO BE REVIEWED. MAB 04/27/2007 REPLACEMENT QUESTION IS MINIMALLY ACCEPTABLE. MAB 04/30/2007
27	H	2											027AG2.4.6 (NEW) Indent to different horizontal points when there is a list within a list. The bullets following the colon should be indented to a different point. Corrected. MAB 04/27/2007 Is this question written at the RO knowledge level? Licensee was not sure. They are going to try to get rid of the procedures part of the answer choices to ensure that it is at the RO level. MAB 04/27/2007

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Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				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
29	F	1-2				x							028K6.01 (BANK) One H2 recombiner will limit concentration to 4%. If the B Train H2 Recombiner is lost and the 'A' EDG is out with a design basis LOCA, then how many H2 recombiners are left operating? Discuss with licensee. One H2 Recombin is in service. MAB 04/27/2007 Is knowing the definition of a DBA LOCA RO knowledge? Removed. MAB 04/27/2007 I see plausibility in testing if H2 concentration will remain below 4%, but I am not seeing the plausibility in greater than 8% (even though this is two times 4%). Discuss with licensee. This may be minimally acceptable. MAB 04/27/2007 QUESTION IS MINIMALLY ACCEPTABLE. MAB 04/27/2007
30	F	2											029A4.01 (NEW) Plausibility of 8000 appears to be random. Discuss with licensee. 8000 corresponds to one train. OK MAB 04/27/2007
31	F	2											029AG2.2.25 (NEW) Question is OK. Is this RO knowledge? Licensee stated that this was clearly RO knowledge at their facility. MAB 04/27/2007 Deleted the word "all" in "A" and "D". MAB 04/27/2007 QUESTION IS SATISFACTORY. MAB 04/27/2007 QUESTION IS NOT SAT. THEY MADE MORE CHANGES AND DID NOT COMPLETELY UPDATE THE QUESTION. THIS QUESTION NEEDS TO BE

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				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
													COMPLETED AND THEN REVIEWED. MAB 05/01/2007 IS THE Q RO KNOWLEDGE? FSAR? IS THE K/A MET? TS BASIS? DOES "FUEL INTEGRITY" MEAN THE SAME THING AS "REACTOR CORE SAFETY LIMIT"? MAB 05/03/2007 LICENSEE (SRO REPRESENTATIVE) ASSURED US THAT IT WAS RO KNOWLEDGE. ADDED K/A JUSTIFICATION. MODIFIED WORDING TO MORE ACCURATELY STATE "FUEL INTEGRITY." OK MAB 05/04/2007 THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
32	F	2										S	035K5.03 (NEW) Question is OK. QUESTION IS SATISFACTORY. MAB 04/27/2007
33	F	+				x						U	038EK3.06 (BANK) "C" is not plausible. The RCS already has a hole in it, so low temp / high press conditions are not likely. Believing that isolation of a ruptured SG will ensure that PTS conditions will not be challenged is not credible. SBLOCA / SGTR situation should be conducive to plausibility of PTS. MAB 04/27/2007 "A" is not plausible. When an all-encompassing term, like "ALL" is used, then this answer choice is rarely the correct answer. There only has to be one insignificant contingency available that would disqualify this answer choice from being correct. This distractor must be modified to address this concern. Distractor modified – OK. MAB 04/27/2007 "D" is not plausible unless the licensee can describe how

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													this would be a likely misconception that would discriminate between a competent and a less than competent licensed operator. Licensee enhanced justification of this distractor – OK. MAB 04/27/2007
													LOD=1 due to the lack of credibility in the distractors. The correct answer is good if other distractors can be developed. Enhancements have raised LOD to 2. MAB 04/27/2007
34	H	I				x					x	U E S	039A2.04 (NEW) K/A is not matched. The K/A requires testing knowledge of using procedures to correct, control, or mitigate the effects of the malfunction. The applicant can arrive at the correct answer by only knowing that dumps fail open and that dumps are armed. Therefore, no procedural knowledge is required to answer this question. Corrected. MAB 04/27/2007
													None of the procedural action words in the answer choices adds information that is needed to make the answer choice unique. This information should be deleted unless it adds something to the answer choice that makes that answer choice unique. Consequently, this is also the reason why the K/A is not matched. Corrected and in the process brought the question back to matching the K/A. MAB 04/27/2007
													Steam dumps are always armed when in steam pressure mode. Testing this in “A” and “B” makes these choices not plausible. Deleted ARMING portion of “A” and “B” – OK MAB 04/27/2007
													The stem should state that the dumps are modulating in some mid-position to maintain main steam header pressure. Should be addressed by the power level. – OK MAB 04/27/2007
													* LICENSEE WAS GOING TO TRY TO TIE THE ANSWERS TO A PROCEDURE. THIS IS THE ONLY ITEM LEFT TO VERIFY. MAB 04/27/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				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
35	F	2										E	ANSWER IS TIED TO AOP-S.05 IN THE ANALYSIS SECTION AND EMP-4 FOR PRUDENT OPERATOR ACTIONS. OK MAB 05/01/2007 QUESTION IS NOW SATISFACTORY. MAB 05/01/2007
												S	039A3.02 (NEW) Be consistent with the order of SI and MSLI. I.E.: A. SI has occurred. MSLI has occurred. B. SI has occurred. MSLI has NOT occurred. C. SI has NOT occurred. MSLI has occurred. D. SI has NOT occurred. MSLI has NOT occurred. Incorporated. MAB 04/27/2007 QUESTION IS SATISFACTORY. MAB 04/27/2007
36	F	2										S	Why is 2 hours plausible? (Tech Spec for DC Dist has a 2 hour action.) OK MAB 04/27/2007 QUESTION IS SATISFACTORY. MAB 04/27/2007
37	H	2				x					x	U	056AG2.4.31 (NEW) K/A not matched. The K/A requires testing knowledge of a LOOP. In this case, a LOOP has not occurred. The distractor analysis even states that a LOOP is incorrect. Therefore, an applicant can answer the question simply by knowing that there is a Unit Board Failure and the reactor should have tripped. No knowledge of a LOOP is required to arrive at the correct answer. In other words, the applicant can cover up all the distractors, read the stem and circle the correct answer, without having any knowledge of a LOOP. Licensee will add a note on K/A match due to having a partial loss of offsite power. OK MAB 04/27/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward			Q= K/A
														"C" & "D" are not plausible: A "LOOP to Unit Board 1C" can be considered a "Failure of Unit Board 1C". A possible fix would be to be specific on the type of failure for Unit Board 1C in "A" and "B". The concern here is that "C" (& "D") is not plausible as written, because "A" (& "B") is the same as "C" (& "D"), but written more generically – so "C" (& "D") would never be considered. "A" and "B" changed to incorporate a specific failure. This correction was needed because in the licensee's original submittal, the question was iterating between a failure of the board and a specific failure of the board, which did not provide unique answer choices. OK MAB 04/27/2007
														*
38	H	2										x	U S	057AK3.01 (NEW) Typographical: Is the wording of the question portion of the stem correct? Have licensee read and correct as necessary. Corrected. MAB 04/27/2007 Would a reactor trip occur on a loss of Board 1-IV? If not, then this should not be stated in the stem – this would be considered "teaching." If the reactor would trip on a loss of the Board, then the last bullet can remain in the stem. Rx Trip could occur on SG levels. OK MAB 04/27/2007 It is OK to use instruction from an AOP to meet the K/A, as long as the rules of usage are set up to combat the issue using the AOP to complement the EOP usage. In other words the AOP would be used in conjunction with the EOP. If the reactor does not trip and the EOPs are not entered, then the K/A would not be met. Licensee to add K/A match justification. There are no EOP actions, therefore the AOP actions are deemed acceptable. MAB 04/27/2007
														QUESTION IS SATISFACTORY. MAB 04/27/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units		
39	H	2				x						058AA1.01 (BANK) Change the time in "D" to one (1) hour. Changed. MAB 04/27/2007 The third bullet states that the output breaker opens. Is this output breaker name unique to Unit 1, or does the breaker number need to be provided so that applicants know this is a Unit 1 component? Discuss with licensee. Common component. -- OK MAB 04/27/2007 How is "C" plausible? With no malfunctions on Unit 2, why would they consider stopping the movement of the upper internals on that unit? Discuss with licensee. Common component. -- OK MAB 04/27/2007 QUESTION IS NOW SATISFACTORY. MAB 04/27/2007
40	F	2				x				x		059A1.07 (BANK) Question is written as backward logic. It is probably OK since it is written from a troubleshooting perspective -- thus making it operationally valid. Acknowledged. MAB 04/27/2007 Each answer choice is written as an "OR" statement. Therefore, only half of each answer choice needs to be correct in order for that answer choice to be correct. The author (I think) tried to address this in the stem by asking for which two failures could cause the transient. Is there a way to strengthen the wording in the stem so that the applicant knows for sure to consider each failed instrument independently and that the correct answer needs to contain both instrument failures that could independently create the situation described in the stem? Changed to two column format to resolve logic issue. MAB 04/27/2007 QUESTION IS NOW SATISFACTORY. MAB 04/27/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward	Q= K/A
41	F	2												059AK1.02 (NEW) LOK=F: This is essentially a memory item which requires the applicant to recall the limits for types of radiation and contamination areas. Too many items are being used in the iteration. Limit the items to the number necessary to develop unique answer choices. Extra items simply provide more opportunities for applicants to eliminate answer choices. Many times extra items also cause the K/A not to be met because the answer can be deduced without using knowledge required by the K/A. Choose the best two items that allow for the K/A to be met and iterate on those items. Maybe try: A. Radiation Area AND Contamination Area B. High Rad Area AND Contamination Area C. Radiation Area AND High Contamination Area D. High Rad Area AND High Contamination Area Discuss this with the licensee. LICENSEE STILL NEEDS TO INCORPORATE MY SUGGESTED CHANGES. THE INCORPORATION OF THESE CHANGES SHOULD ADDRESS THE ISSUES LISTED ABOVE. MAB 04/27/2007 QUESTION IS NOW SATISFACTORY. MAB 04/30/2007
42	F	2	x											060AK1.01 (MODIFIED) Stem does not unequivocally elicit the correct answer: This is a dangerous format for a written question and very difficult to review thoroughly. The correctness of this question relies entirely on the word COMPLETELY, which means that there only needs to be one forgotten exhaust location, and there is no correct answer. The format of this question will need to be changed to eliminate this concern.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>Question changed to address concern. OK MAB 04/27/2007</p> <p>Suggestion: If you are testing knowledge of the Service Bid Exhaust, then in two of the answer choices state specifically that the Service Bid Exhaust is not monitored. – etc. Then get rid of the word COMPLETELY in the stem. Suggestion incorporated. OK MAB 04/27/2007</p> <p>Also keep in mind that items that appear in every answer choice do nothing to make that answer unique. Delete these from the appropriate locations when revising the question. Incorporated. OK MAB 04/27/2007</p> <p>For example: Which ONE of the following correctly states whether the Service Building is a potential monitored location for airborne effluents of gaseous waste and the correct unit of measurement? A. Service Building is not a potential source. / cps B. Service Building is not a potential source. / mr/hr C. Service Building is a potential source. / cps D. Service Building is a potential source. / mr/hr This comment was incorporated, but it introduces another issue in that it makes no sense to test on units when the SB is not a potential source. The question still requires work. MAB 04/27/2007</p> <p>To make this question even tighter, try to link it to an alarm. Discuss these concerns with the licensee.</p> <p>THIS QUESTION STILL REQUIRES MODIFICATION. LICENSEE MUST ADDRESS CONCERNS. MAB 04/27/2007</p> <p>MODIFIED QUESTION IS NOW SATISFACTORY. MAB 05/01/2007</p>
43	F/H?	2											E 061K6.02 (BANK)

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				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
													Is there documentation that can support 220 GPM to each SG? The provided reference material only states what the capacity of the pump is. How is the control system set up to guarantee 220 gpm to each SG? Or is it possible that one SG could get 210 gpm and the other could get 230 gpm? Discuss with licensee. Wording of question modified to "approximate." OK MAB 04/27/2007
													QUESTION NOW SATISFACTORY. MAB 04/27/2007
44	H	2				x						U	944 062AK3.01 (NEW)
												S	"C" and "D" are not plausible because they are essentially the same. Having no pumps running would yield essentially no header pressure. Corrected. MAB 04/27/2007
													Can bullets three and four be combined to read: "0-FCV-67-152, CCS HX 0B1/0B2 Disch Valve to Hdr B, has been closed to isolate a leak."? Discuss with licensee. Incorporated. MAB 04/26/2007
													Plausibility of "C" and "D" (possible fix)
													Under what conditions will the valve open to its 50% Open position? The distractors "C" and "D" may be better if they state that the valve will open to there 50% position, vice stating that they will remain closed. Discuss with licensee. Comment not incorporated exactly, but they did address the concern. OK MAB 04/27/2007
													*
													QUESTION IS NOW SATISFACTORY. MAB 04/27/2007
45	F	1				x						U	062G2.1.14 062G2.1.10 (NEW)
												S	K/A requires testing knowledge of A.C. Electrical Distribution. This question only tests administrative requirements for starting an electrical component. Therefore, the K/A is not matched. LICENSEE WAS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													SUPPLIED WITH A NEW K/A ON 4/25/07. THE K/A IS 062G2.1.10. MAB 04/27/2007
													This may be a prime candidate to have the K/A replaced. LICENSEE WAS SUPPLIED WITH A NEW K/A ON 4/25/07. THE K/A IS 062G2.1.10. MAB 04/27/2007
													OPDP-1 does not state a requirement for starting large equipment. It only states a preference (I.E. "should") for doing so. There is no correct answer for this question because there is no requirement for making the PA announcement. Comment was written for initial question. MAB 04/27/2007
													Distractor "A" and "C" are not plausible. Three times would not be a requirement given another set of circumstances. It is common to require things to be done twice (or verified), but very rare to have something either performed or verified three times. Comment was written for initial question. MAB 04/27/2007
													LOD=1: Question is too basic and does not discriminate at the appropriate level to determine a competent operator from a less than competent operator. Comment was written for initial question. MAB 04/27/2007
													* LICENSEE WAS SUPPLIED WITH A NEW K/A ON 4/25/07. THE K/A IS 062G2.1.10. THE REPLACEMENT QUESTION STILL NEEDS TO BE REVIEWED. MAB 04/27/2007
													REPLACEMENT QUESTION: IS THIS RO KNOWLEDGE? IT IS DIFFICULT TO UNDERSTAND THE QUESTION AS WRITTEN? MAB 05/02/2007
													SRO REPRESENTATIVE ASSURED US THAT Q WAS TESTING RO KNOWLEDGE AT SQ. QUESTION WAS REWORDED. OK MAB 05/04/2007
													THIS QUESTION IS NOW SATISFACTORY. MAB

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units		
												05/04/2007
46	F	1 2				x					U S	063G2.2.22 (BANK) The correct answer stands out from all the other answer choices. All the other choices give an equipment alignment and "B" provides data from Elec Maintenance. If an applicant does not know the correct answer, "B" is the most likely to be chosen simply because it provides entirely different information from the other choices. The correct answer needs to be changed or the other answer choices need to be changed. The symmetry in this question, as written, leaves little credibility for the other three distracters. LOD=1 for same reason. QUESTION SIGNIFICANTLY MODIFIED. MAB 04/27/2007 QUESTION NEEDS TO BE REVIEWED. IF IT IS TECHNICALLY ACCURATE, THEN IT WILL BE SAT. MAB 04/27/2007 QUESTION IS NOW SATISFACTORY. MAB 05/01/2007
47	F	1-2									U? S	064K4.01 (BANK) This is an easy K/A to write a discriminating question. Given the overall low LOD for the exam, this opportunity should be taken to write a discriminating question. This K/A sets up easily to test setpoint data of the various trips, etc. Discuss with licensee. QUESTION IS MINIMALLY ACCEPTABLE. MAB 04/27/2007
48	F	1				x					U S	069 068AK2.02 (BANK) Question is minimally discriminating. LOD=1. Should be corrected when licensee incorporates my suggestion below. MAB 04/27/2007 "B" is not plausible. If the reactor is tripped in the MCR, then it is only common sense to take an additional couple of seconds to verify that. Should be corrected when licensee

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws						4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Backward				Q= K/A
														incorporates my suggestion below. MAB 04/27/2007	
														"D" is not plausible. Licensed operators are going to be in the control room when they realize that there is too much smoke in the control room. They would not announce over the PA for their colleagues, who are also located in the control room, to evacuate the control room. Should be corrected when licensee incorporates my suggestion below. MAB 04/27/2007	
														Suggestion: Write question to test whether the reactor should be tripped in the MCR or in the Aux CR. Then iterate on whether or not E-0 is entered (I am assuming it is not entered, based on the note in the procedure.)	
														Give same conditions in the stem. Then phrase the question and answers similar to this.	
														Which ONE of the following responses correctly describes proper actions by the operating crew?	
														A. Trip the reactor in the MCR prior to evacuation. Perform post trip actions in accordance with E-0, Reactor Trip or Safety Injection.	
														B. Trip the reactor in the MCR prior to evacuation. Dispatch personnel to perform applicable sections of AOP-C.04, Shutdown From Auxiliary Control Room, Appendix Z.	
														C. Evacuate the MCR, then trip the reactor from the Reactor Trip Breakers after the Aux Control Room is manned. Perform post trip actions in accordance with E-0, Reactor Trip or Safety Injection.	
														D. Evacuate the MCR, then trip the reactor from the Reactor Trip Breakers after the Aux Control Room is manned. Dispatch personnel to perform applicable sections of AOP-C.04, Shutdown From Auxiliary Control Room, Appendix Z.	
														LICENSEE AGREED TO INCORPORATE MY SUGGESTION. THIS NEEDS TO BE VERIFIED. MAB 04/27/2007	

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Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													STOPS – IS THIS THE COMPRESSOR? LICENSEE NEEDS TO CLEAR UP INCONSISTENCIES WITH 072A2.01 ALSO. MAB 05/01/2007 PLAUSIBILITY ADDRESSED AND LANGUAGE CORRECTED. MAB 05/04/2007 THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
50	F	2				x					x	U S	072A2.04 034A3.02 (BANK) Backward logic. Noted. OK MAB 04/27/2007 K/A is not matched. The applicant can arrive at the correct answer without knowing how to use procedures to correct, control, or mitigate, which is required to be tested. The correct answer can be determined strictly using system knowledge of what can cause the alarm. Removed unnecessary items from the answer choices to allow the K/A to be matched. MAB 04/27/2007 More than one correct answer exists because of the use of the word “or” in the answer choices. The word “or” means that only one of the conditions in the answer choice must be true in order for that choice to be correct. Discuss with licensee. Removed unnecessary items from the answer choices to ensure only one correct answer. MAB 04/27/2007 Question statement needs to specifically state in accordance with the AR that is referenced in the stem. Incorporated. MAB 04/27/2007 It is never wrong to simply “refer” to an AOP. This information, if it remains in the revised question, must be specific to actually performing the steps of the AOP. Incorporated. MAB 04/27/2007 It is never wrong to notify the WCC. Anytime a piece of equipment breaks it would be OK to notify the WCC. Similar comment for RADCON – it is never wrong to notify them -- It may be necessary to test other actions

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>besides notifications. THIS STILL NEEDS TO BE ADDRESSED. MAB 04/27/2007.</p> <p>* BEFORE THIS QUESTION CAN BE MINIMALLY SATISFACTORY, THE COMMENT REGARDING NOTIFICATIONS TO WCC AND RADCON MUST BE ADDRESSED. SECOND PART OF ANSWER CHOICES MUST BE REPLACED. MAB 04/27/2007</p> <p>LICENSEE DID NOT ADDRESS THE WCC AND RADCON ISSUE. I ALSO GAVE THEM CONCERNS WITH TESTING ABI IN CONJUNCTION WITH ARM ALARMS, VICE PRM ALARMS. QUESTION IS STILL UNSAT. MAB 05/01/2007</p> <p>LICENSEE REQUESTED A NEW K/A DUE TO NOT BEING ABLE TO DEVELOP OPERATIONALLY VALID QUESTION THAT MEETS K/A. NEW K/A WAS SELECTED BY CE (034A3.02). MAB 05/02/2007 REPLACEMENT Q OK. MAB 05/04/2007</p> <p>THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007</p>
51	F	1-2											<p>073A2.01 (BANK)</p> <p>"C" and "D" are not plausible. What rad monitor alarms in your plant annunciate on HIGH flow through the monitor? If there are other similar monitors that have annunciators for HIGH flow, then these two distractors are plausible; otherwise, they do not discriminate at the appropriate level. According to the licensee, RM-19 does have a high flow alarm, therefore plausibility of these two distractors is acceptable. MAB 04/27/2007</p> <p>The supplied reference does not state that the B/D will be isolated if the alarm annunciates. I expected to see an AUTO ACTION section of the AR. Verified on page 28. MAB 04/27/2007</p> <p>THIS QUESTION IS NOW SATISFACTORY. MAB</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
52	F	2				x							04/27/2007 073K5.01 (NEW) Delete level of activity from each answer choice. If it is in each choice, then it is not needed to discriminate between answer choices. The question and answer choices would then read as follows: Which one of the following describes the type of detector used by the Condenser Vacuum Exhaust Radiation Monitor 1-RM-90-119 AND the effect of the process flow rate on the indication? A. Scintillation detector. Flow rate of the sampled process does not affect the indication. B. Scintillation detector. Flow rate of the sampled process does affect the indication. C. Etc. Incorporated. MAB 04/27/2007 Are there any process rad monitors at your plant where flow rate of the sampled gas does not affect the indication? If not, then the second part of the distracters need to be modified or replaced due to plausibility concerns. THIS COMMENT STILL NEEDS TO BE ADDRESSED. MAB 04/27/2007 THE SECOND HALF OF THE ANSWER CHOICES MUST BE REPLACED BEFORE THIS QUESTION CAN BE SATISFACTORY. THIS QUESTION MAY BE SAT IF THE LICENSEE CAN BE MORE SPECIFIC WITH THE WORDING IN THE SECOND HALF OF THE DISTRACTORS. - TRY TO MIRROR THE WORDING IN THE AR MAB 04/27/2007 CORRECTED - OK MAB 05/04/2007 THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
53	F	2				x							074EAL08 (BANK) There is an extra space prior to the period in "B". Corrected. MAB 04/27/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
54	F	2											<p>I cannot see the plausibility in any of the distractors when there is nothing in the stem to force the applicant to know if higher head sources are available or not. Discuss with the licensee. Items added to stem. – OK MAB 04/27/2007</p> <p>QUESTION IS NOW SATISFACTORY. MAB 04/27/2007</p>
													<p>075G2.1.23 (NEW)</p> <p>Add to the question – “in accordance with 0-SO-27-1.” Incorporated. MAB 04/27/2007</p> <p>“D” is also correct: If an operator could perform “D” as it is written, would this not be correct? The operator may need to go back and make an additional PF adjustment, but if the operator could make a quick PF adjustment and still be able to stop the valve at 25%, then this would in fact be a correct process. PF adjustments are a skill of the craft type of activity. Licensee did not disagree. Modifications corrected the issue. MAB 04/27/2007</p> <p>One solution may be to make the answer choices as follows: A. Verify the CCW Pump discharge valve 5% open THEN start the associated pump. B. Verify the CCW Pump discharge valve 25% open THEN start the associated pump. C. Start the CCW Pump THEN manually stop the discharge valve travel at 5%. D. Start the CCW Pump THEN manually stop the discharge valve travel at 25%.</p> <p>Licensee made revisions to correct the issues, but the modification only approximated my suggestion. MAB 04/27/2007</p> <p>* QUESTION IS NOW SATISFACTORY. MAB 04/27/2007</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward	Q= K/A
55	F	1-2				x	x							<p>076K1.16 (BANK)</p> <p>Third bullet is inherent in the NUREG-1021 App. E exam rules. Discuss with the licensee to determine if this should remain in the stem. Deleted. MAB 04/27/2007</p> <p>The correct answer entirely depends on the point in time that the question is answered. In other words, immediately after the LOOP and a few seconds thereafter, no ERCW pumps will be running. This would lead to no correct answer. The question needs to be specific with respect to the point in time that the applicant must state the status of the ERCW pumps. LICENSEE STILL NEEDS TO INCORPORATE COMMENT. MAB 04/27/2007</p> <p>This is really a fundamental LOK. This is factual information that the applicant will have memorized – leading to little or no higher cognitive thought process.</p> <p>“A” and “D” are not plausible because “A” is a subset of “D”. The pumps that were not running prior to the SI would be encompassed in ALL pumps running. Appendix E states that there is only allowed to be one correct answer, so the applicant knows psychometrically that these two choices are not viable options. LICENSEE STILL NEEDS TO INCORPORATE COMMENT. MAB 04/27/2007</p> <p>One suggestion would be to place in the stem when the EDG brkr closes, etc. and test some of the specifics of when and how many pumps will be running. This may also get the question closer to a higher cog LOK.</p> <p>It may be better to have specific ERCW pump switch alignments in the stem and then test exactly which pumps are running at a certain point in time. Discuss with licensee. LICENSEE AGREED TO INCORPORATE THIS. MAB 04/27/2007</p> <p>“B” plausibility: What other pumps of comparable size stay tied to the bus after a LOOP? Pumps with HS in AUTO- A/S will be running. MAB 04/27/2007</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward			Q= K/A
56	F	2												<p>Could "B" be correct if four pumps were running prior to the blackout? Yes – licensee should address this with question revision. MAB 04/27/2007</p> <p>* PRIOR TO THIS QUESTION BEING SATISFACTORY, THE LICENSEE MUST ADDRESS THE COMMENTS ABOVE. MAB 04/27/2007</p> <p>LICENSEE HAD AGREED TO USE SPECIFIC PUMPS IN STEM, BUT THEN DID NOT IMPLEMENT THAT CHANGE. LICENSEE ALSO DID NOT CORRECT DISTRACTOR ANALYSIS. WHAT IS THE PURPOSE OF THE SELECTOR SWITCH? MAB 05/01/2007 ISSUES CORRECTED. MAB 05/04/2007</p> <p>THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007</p>
														<p>078K1.04 (BANK)</p> <p>The question needs to state: Which ONE of the following is the correct crew response as directed by the AR for the alarm given in the stem (place the AR number and window in the bullets and in the question)? Incorporated. MAB 04/27/2007</p> <p>Distractor "A": Strengthen the incorrectness of this choice because shutting down a distressed piece of equipment is many times successfully argued as a correct answer. State something like: Verify Aux Air Compressor "A" automatically tripped. Incorporated. MAB 04/27/2007</p> <p>LOK=F Question requires applicant to have automatic trips memorized and cooling alignments memorized, but little or no higher cognitive thinking is required to arrive at the correct answer.</p> <p>QUESTION IS NOW SATISFACTORY. NEED TO</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Back-ward	Q= K/A
57	F	1-2				x	x						ENSURE LOK IS CLASSIFIED CORRECTLY. MAB 04/27/2007 086A2.01 (NEW) Question is written at the fundamental level of knowledge. If the applicant knows one piece of memory level information (septi for fire pump start), then the correct answer can be determined. Modification addressed this comment. MAB 04/27/2007 "D" is correct as written. If operators ensure header is pressurized to 112 psig, then the pump will not restart. If they did this, they would also be performing the actions described in "D". "D" modified to address the comment. - OK MAB 04/27/2007 "A" and "B" would be more plausible if the header pressure in the stem is changed to 110 psig. This comment affects "D". Not incorporated due to other changes. MAB 04/27/2007 QUESTION IS NOW SATISFACTORY. MAB 04/27/2007	U S
58	H	4 2				x					x		103A1.01 (BANK) "C" is not plausible. Nothing in the stem indicates that any RCS, fission product barriers, shielding, or criticality concerns are present. After discussion, this was deemed minimally acceptable. MAB -04/27/2007 "A" and "D" are not plausible. Psychometrically, if temperature is affected, then humidity can also be affected. Therefore, the interaction between these two answer choices causes them both to not be plausible. Noet yet addressed. Necessary revisions to meet the K/A may correct this too. MAB 04/27/2007 MOST indicates that more than one answer could be correct, but one answer could be more correct. This is not	U S

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>allowed by the NUREG. Incorporated. MAB 04/27/2007</p> <p>LOD=1 due to above comments. Necessary revisions to meet the K/A may correct this too. MAB 04/27/2007</p> <p>K/A not matched: No knowledge of operating in order to avoid exceeding a design limit is being tested.</p> <p>*</p> <p>K/A REQUIRES TESTING KNOWLEDGE TO PREVENT FROM EXCEEDING A DESIGN LIMIT. THIS NEEDS TO BE INCORPORATED PRIOR TO THE QUESTION BEING SATISFACTORY. ALSO NEED TO ENSURE THAT THE REVISION CORRECTS THE OTHER CONCERNS LISTED ABOVE. MAB 04/27/2007</p> <p>QUESTION IS NOW SATISFACTORY. MAB 05/01/2007</p>
59	F	2											<p>103K3.03 (NEW)</p> <p>Question is OK.</p> <p>QUESTION IS SATISFACTORY. MAB 04/27/2007</p>
60	H	2											<p>E02EA1.3 (BANK)</p> <p>Place two lists in the stem. One list would be Initial Plant Conditions containing the same conditions that are currently there. Then make a second list titled Current plant Conditions. Place in this second list (1) Containment pressure is 2.5 psig. And (2) The crew has just completed transition from ES-1.1. Moving it up to the list of conditions will clean up the question portion. Incorporated. MAB 04/27/2007</p> <p>"C" states "A-Auto" and "B" states "A-AUTO". They need to read the same. This is a subtle hint that neither of these are the correct answers because the correct answer is always scrutinized harder than the distractors.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
61	F	1				x							Incorporated. MAB 04/27/2007 QUESTION IS NOW SATISFACTORY. MAB 04/27/2007 E04AG2.1.28 (NEW) “A” and “B” are not plausible. It does not make sense to entirely isolate a safety function while troubleshooting a leak. Added a statement to the stem discussing the location in the pipe chase. This should help plausibility slightly. These distractors are now minimally acceptable. MAB 04/27/2007 LOD=1 due to there only being one credible distractor. Addressed with addition to the stem. MAB 04/27/2007 QUESTION IS NOW MINIMALLY SATISFACTORY. MAB 04/27/2007
62	H	2				x							E05EA1.3 (BANK) “D” is not plausible. There is a loss of heat sink. There is no LOCA. There is no mechanism in the stem that could create a plausible loss of RCS inventory. “D” modified to address comment. -- OK MAB 04/27/2007
63	F	2					x						E11EK3.2 (BANK) All answer choices are written as one sentence. Consider placing the reason on one line and placing the actions on the following line. The limits were removed to address the comment. OK MAB 04/27/2007 The question asks for the reasons and then for the limits, but all the reasons are unique, therefore the applicants do not need to know anything about the limits in order to arrive at the correct answer. Delete the second part (the “limits” portion) of all answer choices. The limits were removed to address the comment. OK MAB 04/27/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													Possible second correct answer. Distractor "D": At this point in the procedure a cooldown has already occurred. Therefore, could it be correct that depressurizing could in fact be done in order to allow RHR to be placed in service? The next step states to check with the TSC about placing RHR in service. Discuss with the licensee. - LICENSEE AGREED TO REPLACE Q. MAB 04/27/2007
													LICENSEE WILL REPLACE QUESTION. THE REPLACEMENT QUESTION MUST BE REVIEWED PRIOR TO THIS QUESTION BEING SATISFACTORY. MAB 04/27/2007
													REPLACEMENT QUESTION DISTRACTOR "A" IS NOT PLAUSIBLE. IT IS NOT CREDIBLE FOR AN APPLICANT TO THINK IT ACCEPTABLE TO MAXIMIZE SI FLOW FROM THE RWST WHEN IN A LOSS OF RHR SUMP RECIRCULATION CONDITION. MAB 05/01/2007
													"A" REPLACED. OK MAB 05/04/2007
													THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
64	H	1-2	x					x				U	E12AG2.4.31 (NEW)
												S	There is not enough information in the stem to elicit the correct answer. For instance, how are Thots trending? If they are already trending up, then operators would not maintain AFW flow at the current rate. Thot info added to stem. OK MAB 04/27/2007
													The Alarm Response Procedures for the listed alarms were not provided. What level will cause these alarms to annunciate? 8% - OK MAB 04/27/2007
													Why does the stem not contain any information on SG #2? Added. MAB 04/27/2007
													Two Correct Answers. Why is "A" incorrect? ECA-2.1 states that feed flow to

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													affected SGs are to be maintained GREATER THAN or equal to 25 gpm until level is greater than 10%. Therefore, applicants would be in compliance with the procedure if they raised flow above 25 gpm. Corrected. MAB 04/22/2007
													From a psychometric viewpoint, if "A" is correct, then "B" could also be correct if SG levels could reach 50% prior to hot leg stabilization. If in all cases, hot leg temps would stabilize prior to 50% SG levels, then this needs to be supported in the distractor analysis and/or supplied documentation. Corrected. MAB 04/22/2007
													"D" is not plausible. The answer choice speaks to 3 of 4 SGs, and the stem only lists parameters/indications for 3 SGs. All of the FRP entry conditions state "ALL" SG less than 10% [25% ADV]. Corrected. MAB 04/22/2007
													Depending on the modifications made, consider changing 50% to 25% and add containment date that places them on one side or the other of having to use adverse numbers. Valve room added for location – thus no adverse numbers. MAB 04/22/2007
													* QUESTION IS NOW SATISFACTORY. MAB 04/27/2007
65	H	1-2				x							E13EK2.1 (BANK) Initiate SG blowdown is not credible in the context of the answers. This is not even an action in FR-H.2. Instead of iterating on this, maybe place a second SG pressure in the stem (SG #1 P=1115 psig) and iterate on dumping steam from one or both SGs. Allowed blowdown because it is an action in FR-H.3. Licensee had an inaccurate distractor analysis. MAB 04/27/2007 A. Verify Feedwater Isolation. Dump steam from SG #1 and SG #2. B. Verify Feedwater isolation. Dump steam from SG #2, but not SG #1.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>C. Isolate AFW flow to affected SG. Dump steam from SG #1 and SG #2.</p> <p>D. Isolate AFW flow to affected SG. Dump steam from SG #2, but not SG #1.</p> <p>Discuss with licensee.</p> <p>All answer choices were clarified. OK MAB 04/27/2007</p> <p>QUESTION IS NOW SATISFACTORY. MAB 04/27/2007</p>
66	F	1-2											<p>G2.1.18 (NEW)</p> <p>eSOMS is an electronic log entry program. The current time stamp is going to automatically appear on any and all log entries. Therefore, the operators will never enter time of entry – it will just automatically appear. This would make "B" a second correct answer. Discuss this with the licensee in case this is different than the SOMS program I have used in the past. Licensee decided not to incorporate this comment prior to April 23. This comment is still valid and prevents this question from being administered due to more than one correct answer. MAB 04/27/2007</p> <p>If needed, one potential modification could be: The order of the items in the answer choices matters according to the referenced procedure. The answer choices could read:</p> <p>A. Required any time required information is not entered at time of event even if logs have not been approved since the actual time of event. Enter the words "LATE ENTRY," followed by the event description.</p> <p>B. Required any time required information is not entered at time of event. and logs were approved after the actual time of event. Enter the words "LATE ENTRY," followed by the event description.</p> <p>C. Required any time required information is not entered at time of event even if logs have not been approved since the actual time of event. Enter the event description followed by the words "LATE ENTRY."</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward			Q= K/A
														<p>D. Required any time required information is not entered at time of event. and logs were approved after the actual time of event. Enter the event description followed by the words "LATE ENTRY."</p> <p>Licensee chose not to incorporate this suggestion. MAB 04/27/2007</p> <p>* THIS QUESTION REMAINS UNSATISFACTORY DUE TO MULTIPLE CORRECT ANSWERS. QUESTION MUST BE MODIFIED OR REPLACED. MAB 04/27/2007</p> <p>THE ABOVE SUGGESTION WAS INCORPORATED BY THE LICENSEE; HOWEVER THE QUESTION ANALYSIS WAS NOT UPDATED AND NO LONGER MATCHES THE QUESTION. MAB 05/01/2007</p> <p>QUESTION ANALYSIS NEEDS TO BE UPDATED. TIE PROCEDURE NUMBER & NAME TO THE CORRECT ANSWER. ADD THE WORD "ONLY" IN FRONT OF "B" and "D". MAB 05/01/2007</p> <p>DELETED "EVEN" INSTEAD OF ADDING "ONLY". TIED TO PROCEDURE. OK MAB 05/04/2007</p> <p>THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007</p>
67	F	2												<p>G2.1.2 (BANK)</p> <p>50.54(x) may be invoked if AS A MINIMUM it is approved by an SRO. This is different than stating that an SRO must approve the action. Make this clarification in the correct answer. Incorporated. MAB 04/27/2007</p> <p>QUESTION IS NOW SATISFACTORY. MAB 04/27/2007</p>
68	F	2											S	<p>G2.1.21 (BANK)</p> <p>Have the licensee show where they actually have an OFO</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward	Q= K/A
69	F	1												<p>that contains procedures. If they can show this, then the question is OK. Licensee stated that they have procedures in the OFO. OK MAB 04/27/2007</p> <p>Question is minimally acceptable LOD, but this is a difficult K/A to write a discriminating question. OK MAB 04/27/2007</p> <p>QUESTION IS SATISFACTORY. MAB 04/27/2007</p>
														<p>G2.2.12 (BANK)</p> <p>"A" and "D" are not plausible. Any time intent is changed or the procedure is wrong is not a plausible misconception. This is too basic to discriminate between competent and less than competent licensed operators. This K/A should be conducive to writing an acceptable question. The licensee agreed to replace question. MAB 04/27/2007</p> <p>LICENSEE NEEDS TO DEVELOP A NEW QUESTION. MAB 04/27/2007</p> <p>REPLACEMENT QUESTION DISTRACTOR "C" IS NOT CREDIBLE. THIS DISTRACTOR MUST BE REPLACED PRIOR TO THIS QUESTION BEING SATISFACTORY. MAB 05/01/2007</p> <p><u>SUGGESTION</u> Which ONE of the following correctly states the maximum time allowed to meet the surveillance requirement? SUGGEST CHANGING ANSWER CHOICES TO: A. Surveillance requirements are not satisfied. LCO action statement must be immediately initiated. B. Surveillance requirements are satisfied if the surveillance is completed by 1200 today. C. Surveillance requirements are satisfied if the surveillance is completed by 1500 today. D. Surveillance requirements are satisfied if the surveillance is completed by 0900 tomorrow. LICENSEE INCORPORATED A SIMILAR FIX. OK MAB 05/04/2007</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				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
70	F	2					x					U E S	THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007 G2.2.23 (NEW) The question hangs its correctness on the word "official." Where is this supported in plant admin procedures? What makes the LCO Tracking Log "unofficial"? Both mechanisms for LCO tracking are required by procedure, so could it be argued that they both are official? Could there be two correct answers if both tracking mechanisms are "official"? Licensee will need to modify or replace question. MAB 04/27/2007 QUESTION MUST BE MODIFIED OR REPLACED IN ORDER TO BE SATISFACTORY. MAB 04/27/2007 REPLACEMENT QUESTION: ADD TO THE STEM THAT THE LCO WAS ENTERED AND EXITED PRIOR TO THE END OF SHIFT. THIS IS NEEDED BECAUSE IF THE LCO WAS ENTERED PRIOR TO THE BEGINNING OF THE SHIFT, THEN IT TOO WOULD NEED TO BE UPDATED IN THE LCO TRACKING LOG. MAB 05/01/2007 CORRECTED. OK MAB 05/04/2007 THIS QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
71	H					x						U E S	G2.2.26 (BANK) This question is written at the higher cognitive level without testing any real knowledge at that higher level, except testing if they can add 100 hrs to a given point in time. This question may as well be asked at the lower level. They will incorporate my suggestion. MAB 04/27/2007 Which ONE of the following correctly describes the earliest time fuel can be moved from the reactor after shutdown in

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													accordance with Tech Spec 3.9.3, decay Time? A. 100 hrs from Hot Standby B. 100 hrs from Hot Shutdown C. 100 hrs from Cold Shutdown D. 100 hrs from Refueling Shutdown They will incorporate my suggestion, but leave out the specific TS. MAB 04/27/2007 Distractors "C" and "D" need to be modified because they are not credible. Criticality is directly associated with decay heat and cold shutdown and below is not discriminating at the appropriate level. They will incorporate my suggestion. MAB 04/27/2007 THE Q MUST BE VERIFIED CORRECT AFTER THE LICENSEE INCORPORATES MY SUGGESTION. MAB 04/27/2007 LICENSEE STATED THAT THEY WOULD DESIGNATE QUESTION AS MEMORY LEVEL (LOK=F). THIS DID NOT OCCUR. MAB 05/01/2007 CORRECTED. MAB 05/04/2007 QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
72	H	2					x						G2.3.10 (BANK) The TS Basis Document supports the correct answer. Would the correct answer limit a release in the absence of a tube leak? Are the Aux Bld Area Rad Mntrs unequivocal indication of a tube leak, or should the stem be strengthened to show stronger signs of a tube leak? Discuss with licensee. My concern is ensuring that there is a correct answer. Removed 2 nd bullet. SRO representative ensured that the RCS activity was enough to elicit one and only one answer. MAB 04/27/2007 Could "C" be correct? Raising the PORV setpoints will in fact limit the release because it will cause a situation where the pressure would need to rise to the point where

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Back-ward	Q=K/A
														the SVs would lift. Without raising the sept, the PORVs would lift sooner. Discuss with licensee. Action would not be performed, therefore not correct. Plausible because it would be performed in SGTR. MAB 04/27/2007
														Could "D" be argued correct. The answer choice analysis states that IF SVs or ARVs lifted, then performing the actions of this answer choice would not help limit the release. The question stem does not provide any conditions that would suggest that SVs or ARVs are lifting. Cond demins would not have an impact with current plant conditions. MAB 04/27/2007
														The above two issues must be resolved before designating this question as satisfactory. Q SAT. MAB 04/27/2007
														QUESTION IS NOW SATISFACTORY. MAB 05/01/2007
73	H	I				x						U	S	G2.3.2 (MODIFIED) Replace question. LOD=1. It is obvious that this question is simply testing the ability of the applicant to add and multiply a couple of numbers. This does not discriminate between a competent and less than competent licensed operator. "C" and "D" are not plausible. The question is set up with values in the stem for them to perform calculations, so it is obvious that the only two plausible answers are those that are linked to performing those calculations. Wearing a respirator any time any airborne is present does not make sense. Also, a random value of 40 DAC does not make any sense. The question asks whether a respirator will be worn. We do not test applicants on what they <u>will</u> do. We try to always test them on what they are <u>required</u> to do, or what procedures direct them to do. Discuss with licensee. We have bank questions here in the Region that could be modified or potentially used without

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Back-ward
													modification.
													LICENSEE WILL REPLACE QUESTION. MAB 04/27/2007
74	H	2									x	U E S	G2.4.25 On any question where a reference is to be provided to the applicant, state in the question that a reference has been provided. Incorporate this comment for this question, but also incorporate it on any other questions that require a reference. Changed to no reference. MAB 04/27/2007 Is a reference really needed to answer this question? Changed to no reference. MAB 04/27/2007 In the question feedback section, the exact references that are to be provided need to be stated. Stating that the applicable drawings or references will be provided is not specific enough. In this case, no drawings were provided. This question cannot be reviewed in its entirety until the exact references are provided. Changed to no reference. MAB 04/27/2007 K/A is not matched. It appears that the question author is trying to use the "Action Taken" column of the answers to meet the K/A. However, the applicant only needs to know system knowledge for the probable cause in order to answer the question. This occurs because the "Probable Causes" are all unique. A possible fix would be to word the answer choices as follows: A. Conditions in the 2A charging pump room have caused cross-zone operation and actuated FSV-26-191, but no sprinkler flow occurs. Immediately dispatch the fire brigade in accordance with AOP-N.01, Plant Fires. B. Conditions in the 2A charging pump room have caused cross-zone operation and actuated FSV-26-191, but no sprinkler flow occurs. Immediately dispatch AUO or Fire Ops to investigate cause of the alarm. (Fire Brigade not

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>C. required to be immediately dispatched) Conditions in the 2A charging pump room have caused cross-zone operation and actuated FSV-26-191 and sprinkler flow occurs. Immediately dispatch the fire brigade in accordance with AOP-N.01, Plant Fires.</p> <p>D. Conditions in the 2A charging pump room have caused cross-zone operation and actuated FSV-26-191 and sprinkler flow occurs. Immediately dispatch AUO or Fire Ops to investigate cause of the alarm. (Fire Brigade not required to be immediately dispatched)</p> <p>Keeping the two column format that you had would be good, I just did not have the room to do that on this form.</p> <p>The above suggestion would allow them to narrow down to two answers using systems knowledge, but then to arrive at the final answer, they would need to know the fire protection alarm procedures to know who is required to be dispatched. LICENSEE AGREED TO INCORPORATE THE ABOVE SUGGESTION. MAB 04/27/2007</p> <p>Have the licensee walk me through the technical accuracy of the question. I need some help reviewing the documentation that tells me that the sprinkler heads will not actuate with the provided plant conditions.</p> <p>* QUESTION MODIFICATIONS MUST BE VERIFIED CORRECT. ALSO HAVE THE LICENSEE WALK ME THROUGH THE TECHNICAL ACCURACY OF THE QUESTION. MAB 04/27/2007</p> <p>"A" IS NOT DISPLAYING PROPERLY. IT MUST BE VERIFIED THAT THE FORMATTING IS CORRECT PRIOR TO QUESTION BEING SATISFACTORY. MAB 05/01/2007</p> <p>CONSIDER SIMPLIFYING ANSWER CHOICES. MAB 05/02/2007</p> <p>O IS TECH ACCURATE. FORMAT CORRECTED. O</p>

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Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
78	H	2											<p>Question is satisfactory.</p> <p>QUESTION IS SATISFACTORY. MAB 04/27/2007</p> <p>007G2.1.12 (BANK)</p> <p>Delete the portion of the last bullet that states "... stops dropping..." In an earlier bullet, it was stated that pressure was dropping and in the last bullet it states that pressure is now 2110# and increasing. Incorporated. MAB 04/27/2007</p> <p>K/A Match: The K/A requires testing knowledge of Tech Specs related to the PRT or Quench Tank. The question tests knowledge of PORV and Pressurizer Pressure Tech Specs. There are some Tech Specs associated with PRT instrumentation in the aux control room or aux shutdown panel that may work. Discuss with licensee to see if there are any viable options. Licensee claims that there were no TS associated with the PRT, even though I supplied them with the TS here on the 401-9. They committed to go back and evaluate those TS. At this point, the question does not match the K/A. MAB 04/27/2007</p> <p>The distractor analysis states that the time to restore pressure is correct – the time is the same in all answer choices. What is different in the answer choices is not the time, but the pressure value to which pressure must be restored. Licensee did not address this comment. MAB 04/27/2007</p> <p>* THIS QUESTION MUST BE MODIFIED OR REPLACED IN ORDER TO MATCH THE K/A. MAB 04/27/2007</p> <p>LICENSEE AGREED TO INCORPORATE A CHANGE THAT I COMMUNICATED TO THEM ON THE PHONE (COMMENT ADDRESSED PLAUSIBILITY OF "A"). IF THEY INCORPORATE THESE CHANGES, THEN THE QUESTION WILL BE SATISFACTORY. MAB</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units		
79	H	2										05/01/2007 QUESTION IS NOW SATISFACTORY. MAB 05/02/2007
												008AG2.4.4 (BANK) The stem of the question states that E-1 is being performed. Is it critical that the question does not tell them exactly where they are in E-1? Would the question be improved if the stem stated that E-1 was just entered? Added "just entered" – OK MAB 04/27/2007
80	H	2	x	X?								QUESTION IS NOW SATISFACTORY. MAB 04/27/2007
												011EA2.10 (MODIFIED) Is there enough information in the stem to diagnose that the leak can only occur in the hot leg or cold leg? Could the reactor vessel be the source of the leak? Does the wording of the question need to be modified to address this? Discuss with the licensee. Added "could." - OK MAB 04/27/2007
												I had made a comment/suggestion on the RO exam that dealt with adequate vice inadequate core cooling. When both questions have been corrected, a verification needs to be made to ensure that there are no overlap concerns. OK MAB 04/27/2007
												There are overlap issues between this question and 008G2.4.4. 008G2.4.4 provides information that the applicant can use to link High Pzr Level with a Vapor Space LOCA. This same information can be used to eliminate "A" and "B" as answer choices. O/L reviewed and evaluated as OK. MAB 04/27/2007
												QUESTION IS NOW SATISFACTORY. MAB 04/27/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units		
81	H	2										022A2.03 (NEW) Have licensee explain how/why "lower ice condenser doors may open" is incorrect. This question will be considered satisfactory if a good justification for the incorrectness of "A" and "B" is supplied. Licensee SRO representative at the April 23/24 meeting stated that "lower ice condenser doors may open," was not a concern with conditions in the stem. MAB 04/30/2007 QUESTION IS NOW SATISFACTORY. MAB 04/30/2007
82	H	2				X	X					025A2.01 Will the actions in "B" and "D" correct the problem? It would appear if glycol pumps were swapped then at that point the operators have ensured that one pump is running. If these actions will correct the problem, the next two comments may apply? There are two different pumps, glycol floor circ pumps AND glycol circ pumps. - OK MAB 04/30/2007 "B" could be argued correct because it contains "if required" in the second part of the answer choice. Therefore, with the first part being correct and no definitive action required in the second half, this is technically a correct answer. There are two different pumps, glycol floor circ pumps AND glycol circ pumps. - OK MAB 04/30/2007 Distractor C and "D" plausibility: A similar argument as given for "B" can be supplied for "D", thus making them not plausible. Appendix "E" of NUREG-1021 states that there can only be one correct answer, therefore, the applicants could eliminate these two on psychometrics. There are two different pumps, glycol floor circ pumps AND glycol circ pumps. - OK MAB 04/30/2007 Consider deleting the words "if required" because the question is asking for an action to correct the problem, so if

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units			Back-ward
													these actions are not required, then the answer choices may not fit with the question being asked. Discuss with the licensee. Incorporated. MAB 04/30/2007
83	H	2											QUESTION IS NOW SATISFACTORY. MAB 04/30/2007
													026AG2.2.25 (NEW)
													The safety analysis assumes a single failure. If a single failure occurs with the given plant conditions, then a loss of function with respect to CCW would occur. It must be verified that the wording of the question elicits one and only one correct answer. Added "assuming no other failures exist..." – OK MAB 04/30/2007
													Only include information in the answer choices that are needed to make the answer choices unique. For instance the only actions needed are TRIP THE REACTOR for two answer choices and REACTOR TRIP NOT REQUIRED for the other two answer choices. Incorporated. MAB 04/30/2007
													QUESTION IS NOW SATISFACTORY. MAB 04/30/2007
84	H	2											027G2.4.49 (NEW)
													Typo in correct answer – extra space after "Trip". Corrected. MAB 04/30/2007
													Question does not test SRO-only knowledge: Determining PZR high or low reactor trip, based on the failure, is RO knowledge. Knowing reactor trip criteria is also RO knowledge. Knowing these two pieces of information, the applicant can arrive at the correct answer. Question is still not written at the SRO-only level. MAB 04/30/2007
													Also, an RO is required to know that when the PT fails that one of the first actions an operator (RO) attempts to do is

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													manually control pressure. Question is still not written at the SRO-only level. MAB 04/30/2007
													* THIS QUESTION MUST BE SIGNIFICANTLY MODIFIED OR REPLACED WITH A QUESTION THAT TESTS SRO-ONLY KNOWLEDGE. MAB 04/30/2007
													REPLACEMENT QUESTION HAS ACTIONS TO BE DIRECTED IN EACH ANSWER CHOICE. NONE OF THESE ACTIONS ARE NEEDED TO MAKE THE ANSWER CHOICES UNIQUE. THIS EXTRA INFORMATION CAN BE USED TO ARRIVE AT THE CORRECT ANSWER WITHOUT TESTING ANY SRO-ONLY KNOWLEDGE. THIS QUESTION WILL REMAIN UNSAT UNTIL THIS IS ADDRESSED. ONE SUGGESTION WOULD BE TO DELATE ALL THE ACTIONS AND JUST TEST ONE "ALL PORVS REMAIN OPERABLE" AND "ALL PORVS DO NOT REMAIN OPERABLE". MAB 05/01/2007
													ITEMS NOT NEEDED TO MAKE ANSWER CHOICES UNIQUE WERE DELETED, THEREBY ALLOWING THE Q TO TEST SRO-ONLY KNOWLEDGE. MAB 05/02/2007
													QUESTION IS NOW SATISFACTORY. MAB 05/02/2007
85	H	2				x						U S	039G2.1.14 039G2.1.32 (NEW) Distractor "B": The last sentence does nothing to make this answer choice unique. It was likely placed there to balance this answer choice with a notification, but it does not add information to make this answer choice unique and should be deleted. This comment was for the original Q. A new K/A has now been supplied. MAB 04/30/2007
													"C" is not plausible: Would it usually be procedurally required to call ISI to state that all conditions are normal and they are proceeding?

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>This distractor stands out as not fitting with the question. Discuss with the licensee the possibility of changing the stem to state that either 2 or 3 of the status lights are lit. This comment was for the original Q. A new K/A has now been supplied. MAB 04/30/2007</p> <p>"D" is not plausible: MSLs should be relatively clear of water. For this answer choice to be plausible, the licensee needs to supply procedure information that would indicate that under other normally occurring operating conditions during startup, that Chemistry is required to sample the MSLs. One way to add plausibility would be to add a secondary radiation reading in the stem. This reading should be elevated, but below any value that would require procedural action. This comment was for the original Q. A new K/A has now been supplied. MAB 04/30/2007</p> <p>PROVIDED A NEW K/A(039G2.1.32) ON 04/25/2007. A NEW SRO-ONLY LEVEL QUESTION MUST BE DEVELOPED, REVIEWED, AND APPROVED. MAB 04/30/2007</p> <p>PRECISE LANGUAGE MUST BE USED IN "A" AND "B" BECAUSE IT IS NEVER WRONG TO CONSIDER AN ACTION. IT IS WRONG ONLY WHEN AN INCORRECT ACTION IS PERFORMED. SIMILAR COMMENT TO PREVIOUS QUESTIONS. ALSO, IF PRESSURE IN SG 1 IS LOWERING, IT IS IN FACT BEING USED TO COOLDOWN THE REACTOR; THEREBY MAKING "B" AN ARGUABLY CORRECT ANSWER.</p> <p>ALSO, ENSURE THAT "A" IS CORRECT BECAUSE SG 1 IS ACTUALLY COOLING DOWN RCS. MAB 05/02/2007</p> <p>LOWERED SG P TO 300. CHANGED CTMT P TO 2.3. ADDED "CONTROLLED". OK MAB 05/04/2007</p> <p>QUESTION IS NOW SATISFACTORY. MAB 05/04/2007</p>
86	H												<p>041A2.03 (NEW)</p>

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Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units		
												KNOW ANYTHING ABOUT PROCEDURE SELECTION TO ANSWER THE Q. THE ONLY KNOWLEDGE NEEDED IS RX TRIP CRITERIA AND LOSS OF AIR EFFECTS. WORDING CORRECTS ARE NEEDED IN EACH ANSWER CHOICE. MAB 05/02/2007 EXTRANEIOUS INFO REMOVED FROM ANSWER CHOICES, THUS ALLOWING Q TO TEST AT SRO LEVEL. WORDING CORRECTIONS MADE. MAB 04/05/2007 QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
87	H	2				x	x				U S	045G2.4.30 “C” is a correct answer because if the operator makes a four hour notification, then by default his actions also meet the 8 hour notification. In other words, for the conditions given, the plant staff will make two separate notifications, one to satisfy the 8 hr notification and one to satisfy the 4 hr notification. Added “most limiting”. OK 04/30/2007 “B” is not plausible due to similar reasoning as stated above for “C”. Added “most limiting”. OK 04/30/2007 With a reference, this answer choice is essentially a direct lookup. The only piece of information that technically makes it not a direct lookup is the knowledge that a Main Gen Diff OC will cause a reactor and subsequent turbine trip. The SRO-only level knowledge of this question is a direct lookup. Technically OK based on the Gen OC. Minimally acceptable. MAB 04/30/2007 Consider wording the question to ask for the most limiting (i.e. shortest) time requirement for notification given the conditions in the stem. Complicate the stem to make distractors plausible. Also the K/A is not specific to NRC notification, so if needed the question can include notifications to the NRC and other outside agencies. Added “most limiting”. OK 04/30/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
88	H	1				x						U S	Two distractors discuss “reports” while two distractors discuss “notifications.” The question asks for reportability requirements. It may be a good idea to remain consistent with the terminology and ensure that it parallels what the procedure states. Corrected. MAB 04/30/2007 QUESTION IS NOW SATISFACTORY. MAB 04/30/2007 058AA2.02 (NEW) Delete everything after the first sentence in “A” and “B” and see what that leaves for the answer choices. The first sentence of these two answer choices is all that is needed to make the answer choice unique. The author may be trying to maintain a false sense of symmetry by adding actions when symmetry was first lost by making the first sentence in “C” and “D” the same, but NOT making the first sentence in “A” and “B” the same. Incorporated. MAB 04/30/2007 “C” and “D” are not plausible. It is not a reasonable misconception for an SRO applicant to incorrectly believe that the only thing that determines battery operability is the fact that it is connected to a battery board. Distractors modified. MAB 04/30/2007 “C” is also not plausible because it only has the operator considering an action. Requiring an operator to “consider” an action, without requiring the action, does not correct the abnormal conditions. Corrected. MAB 04/30/2007 Consider iterating on Operable vice Inoperable for the first part of each answer choice. Then iterate on two answer choices for the second part. Incorporated. MAB 04/30/2007 QUESTION IS NOW SATISFACTORY. MAB 04/30/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
89	H	2											068AA2.02 Answer choices state "Trip reactor" but the stem does not even provide the reactor status. Add information to the stem. Incorporated. MAB 04/30/2007 Licensee stated that they wanted to review this question in more detail when they returned to SQ. MAB 04/30/2007 PRIOR TO DESIGNATING THIS QUESTION AS SATISFACTORY, I NEED TO GET CONFIRMATION FROM THE LICENSEE THAT THEIR EVALUATION AT SQ DID NOT RESULT IN ANY NEW CONCERNS. MAB 04/30/2007 LICENSEE DID NOT MAKE ANY CHANGES TO THE QUESTION DURING THEIR FINAL VALIDATION PROCESS, THEREFORE, QUESTION IS NOW SATISFACTORY. MAB 05/02/2007
90	F	1-2				x					x	U S	078G2.4.6 (BANK) Be consistent with ALL CAPS for procedure title in stem and in answer choices. Actually, if the title is given in the stem, then the answer choices do not need the title at all, the procedure number should suffice. Corrected. MAB 04/30/2007 K/A not matched: The K/A requires testing knowledge of Instrument Air. This question appears to test knowledge of Station Air, or Control Air. Typically, even if the air is fed by the same compressors, the air quality (i.e. moisture content) is much different between the two systems. Some plants even have completely different air compressors that supply the Instrument Air System. Discuss the K/A match with the licensee. According to the licensee, Control Air is Instrument Air at SQ. MAB 04/30/2007 Distractors "C" and "D" not plausible: It is not reasonable that operators would be required to intentionally ensure that their backup air supply bottles get

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													bled down to less than 800# prior to swapping back to normal air supply. If the procedure usage is already wrong, then there is no need to make the second part of these answer choices wrong also. - - Actually, see next comment. THIS HAS NOT YET BEEN ADDRESSED, BUT NEEDS TO BEFORE Q IS SAT. MAB 04/30/2007
													The last sentence of each answer choice should be deleted because this information does nothing to make those answer choices unique. In "C" and "D" it only gives them an easy method of disqualifying the distractor due to an action that is not plausible. Be mindful of how deleting the last sentence can also affect the K/A match. Incorporated. MAB 04/30/2007
													There is an extra comma in "B". There may be a typo as well "OF". Not yet addressed. MAB 04/30/2007
													LICENSEE MUST ADDRESS DISTRACTOR CREDIBILITY ISSUES AS NOTED ABOVE. IF LICENSEE CAN ADEQUATELY CORRECT THE DISTRACTORS, THEN THIS Q WILL BE SATISFACTORY. MAB 04/30/2007
													FINALLY CORRECTED. MAB 05/04/2007
													LICENSEE CHOSE NOT TO ADDRESS THE PLAUSIBILITY OF INTENTIONALLY BLEEDING DOWN AN AIR BOTTLE TO < 800# PRIOR TO RE-ALIGNMEMNT. THIS STILL NEEDS TO BE ADDRESSED. MAB 05/02/2007
													FINALLY CORRECTED. MAB 05/04/2007
													QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
91	H	2				x							E07EA2.1 (NEW)
													Wording of "B" and "D".
													Delete the phrasing "You may" from the answer choices. For example, word the second part of "D" similar to: "Actions for the yellow path on Inventory may be performed." Corrected. MAB 04/30/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward	Q= K/A
92	H	1-2				x					x			Plausibility of C: Is it ever required to transition out of a procedure, particularly an ECA, to perform a Yellow path? If not, this is not a plausible distractor. This concern still exists for "A" and "B" now due to the modifications made. May be minimally acceptable. Evaluate in context of entire exam. MAB 04/30/2007 QUESTION IS MINIMALLY ACCEPTABLE. MAB 04/30/2007 E09AG2.2.22 (NEW) Plausibility of "A" and "B": A LOOP has occurred, therefore, the EOP network of procedures is in effect. It is not a reasonable misconception for an operator to believe that a GO should be used to direct a cooldown in such a condition. This comment was written for original Q. Licensee has agreed to write a new Q. MAB 04/30/2007 Plausibility of "B": It does not fit that an emergency boration would be required, yet the cooldown is to be directed by a GO and not an EOP. Are there other times when an emergency boration would be required when not in an EOP? This comment was written for original Q. Licensee has agreed to write a new Q. MAB 04/30/2007 K/A not matched: No knowledge of Tech Specs is being tested. I understand the justification written to support the K/A match – it is true that emergency boration is performed for purposes of maintaining the reactor shutdown; however, it is possible to know that the purpose of boron is to absorb neutrons without having any knowledge of the LCO or Tech Specs. This comment was written for original Q. Licensee has agreed to write a new Q. MAB 04/30/2007 Maybe try to test what the shutdown margin is required to be prior to beginning the cooldown? Some information

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													found in Tech Specs must be tested that would be related to N.C. Your choice of SDM is OK as long as actual tech Spec knowledge is being tested at the SRO level, which may require some Basis knowledge. This comment was written for original Q. Licensee has agreed to write a new Q. MAB 04/30/2007
													* LICENSEE AGREED TO DEVELOP ANOTHER QUESTION AT THE SRO-LEVEL THAT MATCHES THE K/A. THIS NEW Q MUST BE REVIEWED AND ANY COMMENTS RESOLVED PRIOR TO THE Q FOR THIS K/A/ TO BE DESIGNATED AS SATISFACTORY. MAB 04/30/2007
													ENSURE K/A IS MET. CURRENTLY ANSWER CHOICES ARE NOT DEPENDENT ON NC. MAB 05/02/2007 PROCEDURE SELECTION DEPENDENT ON NC. MAB 05/04/2007
													QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
93	F	2				x					x		E15G2.1.32 (NEW) Plausibility of "A": The pressure value given in the stem is only 2.6 psig, which appears to be much too low to add credibility to post-accident integrity. What is the maximum design basis pressure for the containment structure? Placing the pressure below, but close to this value, may add plausibility to this distractor. The transition pressure is 2.8 psig and the design pressure is 12 psig, therefore the pressure was changed to 2.5 psig. OK. MAB 04/30/2007
													Delete the last part of the answer choices that are not needed to make that answer choice unique. Deleted. MAB 04/30/2007
													K/A Match: What system Limit or Precaution is being tested? What

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													procedure and page is the Limit or Precaution stated? The Entry Condition is the Limit being tested. – Minimally acceptable. MAB 04/30/2007
													LOK=F This question can be answered by knowing what procedure to go to with the conditions listed in the stem. Essentially, if the applicant has the information on the containment status tree memorized, then the correct answer can be chosen. THIS STILL NEEDS TO BE ADDRESSED.
													THE LICENSEE MUST CHANGE THE DESIGNATION OF THE LOK TO F. MAB 04/30/2007
													ALSO, THE QUESTION MUST STATE: ""Which One of the following describes the next procedure that is required to be used to mitigate the most limiting condition provided above?"
													ISSUES ADDRESSED. OK MAB 05/04/2007
													QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
94	F	1-2	x									U S	G2.1.13 (NEW) The provided reference states that the vital area access key is only to be issued in an emergency or abnormal operating condition and immediate access is required to protect public health and safety. If this is true, and no conditions are present in the stem to place public health and safety at risk, then the key is not permitted to be issued. Therefore, as written, there is no correct answer. Question must be revised to address this concern. Discuss with the licensee. Added "if conditions require." OK MAB 04/30/2007 Also, be aware that if creating a situation in the stem that brings public health and safety into question, that the only answer that will make sense is going to include an SRO, who is licensed to do anything necessary to protect public health and safety. – be careful with plausibility. All choices contain personnel who are either required to be at the plant or on call. - OK MAB 04/30/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													Question requires modification. Above comments addressed. OK MAB 04/30/2007
													PRIOR TO THIS Q BEING SATISFACTORY, THE LICENSEE MUST SUPPLY PROPER REFERENCE MATERIAL TO SUPPORT ANSWER. THE REFERENCE MATERIAL SUPPLIED AT END OF IP DOES NOT SUPPORT THE CORRECT ANSWER ENTIRELY. MAB 04/30/2007
													ADDITIONAL REFERENCE SUPPLIED ON 4/27. UPON REVIEW, THIS MATERIAL SUPPORTS THE CORRECT ANSWER (NSPD-8; PAGE 4). OK MAB 04/30/2007
													THIS QUESTION IS NOW SATISFACTORY. MAB 04/30/2007
95	H	2										x	G2.1.7 (BANK) Question is not SRO-only knowledge. Cooldown rate is RO knowledge. Tech Spec entry conditions are RO knowledge. Question must be revised or replaced. STILL NEEDS TO BE INCORPORATED. MAB 04/30/2007
													* LICENSEE MUST MODIFY OR REPLACE Q TO MAKE IT SRO-ONLY LEVEL. ONE SUGGESTION WAS TO INCORPORATE TS BASES KNOWLEDGE. MAB 04/30/2007 PRESSURIZER IS NOT PLAUSIBLE. MAB 05/02/2007 REMOVED PZR. OK MAB 05/04/2007
													QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
96	F	2										X?	G2.2.5 (BANK) The question asks for who must approve the change. I agree that the Plant Mgr has final approval, but if any of

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation		
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward	Q= K/A
97	F	2												<p>the other answer choices have signatures in the approval process, then they would also be correct with the current wording of the question. If the licensee can justify only one correct answer, or slightly modify the question to state the "highest" level of approval in accordance with SPP-9.3, then the question should be satisfactory. "Highest" added to address concern. MAB 04/30/2007</p> <p>QUESTION IS NOW SATISFACTORY. MAB 04/30/2007</p>
						x								<p>G2.2.9</p> <p>LOK=F: The stem explicitly states that the test is not described in the FSAR. To answer the question, the applicant only must match the memorized procedural requirement with the words in the one bullet in the stem. STILL NEEDS TO BE INCORPORATED. MAB 04/30/2007</p> <p>Looking at the words in SPP-2.2, Section 3.6, is a "safety evaluation" required, or a "screening review" required. The wording of the correct answer needs to be verified. Furthermore, of these two options, consider replacing "A" with the one that is incorrect. Verified on 04/24/2007. OK MAB 04/30/2007</p> <p>PRIOR TO THIS Q BEING SATISFACTORY, THE CORRECT REFERENCES MUST BE STATED IN THE FEEDBACK SECTION. CHANGE TO MEMORY LEVEL. MAB 04/30/2007</p> <p>CORRECTIONS MADE. MAB-05/04/2007</p> <p>QUESTION IS NOW SATISFACTORY. MAB 05/04/2007</p>
98	H	2												<p>G2.3.4 (MODIFIED)</p> <p>What documentation exists to state that the older volunteer is required to be chosen over the younger volunteer?</p> <p>The licensee read this from a procedure on 4/24/2007. OK</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													MAB 04/30/2007 Section 4.2.B of EPIP-15 states that a person may undertake an emergency mission where dose could exceed 25 rem. So if this is the case, then there really is no maximum exposure limit for volunteers. Furthermore, the procedure clearly states that the 25 rem limit is a guideline. A guideline is different than a requirement. The SED may authorize up to 25 rem. The individual may receive dose above 25 rem on a voluntary basis. OK MAB 04/30/2007 The question asks for who <u>will</u> be selected. The question needs to be worded such as who is required to be selected. Exam questions must be designed to test what someone is required to do, not what someone will do. It is semantics to some degree, but easily corrected. Changed "will" to "should" to align with the procedure. OK MAB 04/30/2007
99	H	I											LICENSEE MUST UPDATE THE REFERENCES IN THE FEEDBACK SECTION IN ORDER FOR THIS QUESTION TO BE SATISFACTORY. MAB 04/30/2007 UPDATED. MAB 05/04/2007 QUESTION IS NOW SATISFACTORY. MAB 05/04/2007
						x						U S	G2.4.30 (NEW) "A" is not plausible. 15 minutes from the time when a parameter starts to change is not credible. Distractor plausibility still needs to be addressed. MAB 04/30/2007 "B" is not plausible. Tripping the reactor is not a reason to enter the emergency plan. Question 045G2.4.30, to an extent, overlaps with this question. If the applicant correctly answers 045G2.4.30, then the applicant knows that a reactor trip is not required to be reported within one hour. Distractor plausibility still needs to be addressed. MAB 04/30/2007
Consider the following question:													

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws				4. Job Content Flaws				6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units			Back- ward
													<p>The following conditions exist for the unit at 100% power:</p> <p>Time Plant Status / Condition 0955 Unplanned loss of 80% of MCR alarms and annunciator printer and CRT in horseshoe 1025 SM decides that increased surveillance is needed above current shift complement 1040 Loss of ICS</p> <p>Which ONE of the following correctly states the time requirements for notifying state and local agencies based on EPIP-1, Emergency Plan Classification Matrix? – assume that the classification is declared as soon as conditions are met to make the declaration.</p> <p>A. County and State notified by 1010. B. County and State notified by 1025. C. County and State notified by 1040. D. County and State notified by 1055.</p> <p>The above question was supplied as an idea. It could be used if validated, or modified if it is not technically correct.</p> <p>Licensee agreed to incorporate some of my comments. MAB 04/30/2007</p> <p>THE REVISED QUESTION MUST BE REVIEWED AND COMMENTS RESOLVED PRIOR TO THIS Q BEING SATISFACTORY. MAB 04/30/2007</p> <p>THEY INCORPORATED MY SUGGESTED CHANGE. QUESTION IS NOW SATISFACTORY. MAB 05/02/2007</p>
100	H	2										x	<p>G2.4.49 (BANK)</p> <p>Question does not test SRO-only knowledge: This question can be answered by only knowing system response and reactor trip criteria - both of which are RO knowledge items. OK since reactor trip criteria is imbedded in an AOP. MAB 04/30/2007</p>

Page 79 of 79

Facility:		Date of Exam:		Exam Level: RO <input type="checkbox"/> SRO <input type="checkbox"/>	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	AKK	TW	MB		
2. Answer key changes and question deletions justified and documented	AKK	TW	MB		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	AKK	TW	MB		
4. Grading for all borderline cases (80 \pm 2% overall and 70 or 80, as applicable, \pm 4% on the SRO-only) reviewed in detail	AKK	TW	MB		
5. All other failing examinations checked to ensure that grades are justified	AKK	TW	MB		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	AKK	TW	MB		
Printed Name/Signature		Date			
a. Grader	<u>Michael Wilson Reese / Michael Wilson Reese</u>	<u>5/16/2007</u>			
b. Facility Reviewer(*)	<u>Frank D. Gallman</u>	<u>5/16/07</u>			
c. NRC Chief Examiner (*)	<u>MARK A. BATES / Mark A. Bates</u>	<u>5/21/07</u>			
d. NRC Supervisor (*)	<u>Robert HAAG / Robert Haag</u>	<u>5/24/07</u>			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

*** sent in 5/9/2007 package
 MB 5/16/2007

Post-Examination Check Sheet	
Facility:	Date of Examination:
Task Description	Date Complete
1. Facility written exam comments or graded exams received and verified complete	05/16/2007
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	05/11/2007
3. Operating tests graded by NRC examiners	05/21/2007
4. NRC chief examiner review of operating test and written exam grading completed	05/21/2007
5. Responsible supervisor review completed	05/22/2007
6. Management (licensing official) review completed	05/22/2007
7. License and denial letters mailed	05/22/2007
8. Facility notified of results	05/23/2007
9. Examination report issued (refer to NRC MC 0612)	06/18/2007
10. Reference material returned after final resolution of any appeals	05/23/2007



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

May 7, 2007

10 CFR 55.40

Dr. William D. Travers
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30323-8931

Attention: Mr. R. C. Haag

In the Matter of
Tennessee Valley Authority

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)

Docket Nos. 50-327
50-328

**SEQUOYAH NUCLEAR PLANT (SQN) - REACTOR AND SENIOR REACTOR
OPERATOR INITIAL EXAMINATIONS - 05000327/2007301 AND 05000328/2007301**

This letter submits information requested in NRC's letter to Karl W. Singer dated November 9, 2006, for the examination to be administrated on May 9, 2007. The enclosure to this letter provides the requested written examination.

This letter contains no new commitments and in accordance with 10 CFR 55.49 and NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," appropriate measures have been taken to ensure examination integrity and security. Accordingly, it is requested that this letter and the enclosed documents be withheld from public disclosure due to the administratively confidential nature of the enclosure, until the examinations are completed.

TVA's principal contact regarding the license examinations is Randy Evans, SQN Operations Training. Should you require additional information regarding this matter, please contact Mr. Evans at (423) 843-4206 or contact me at (423) 843-7170.

Sincerely,

Glenn W. Morris
Manager, Site Licensing and
Industry Affairs

Enclosure

ENCLOSURE

**TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2**

WRITTEN EXAMINATION

- ES-201-2, EXAMINATION OUTLINE QUALITY CHECKLIST**
- ES-401-2, PWR EXAMINATION OUTLINE**
- ES-401-3, GENERIC KNOWLEDGE AND ABILITIES OUTLINE (TIER 3)**
- ES-401-4, RECORD OF REJECTED K/As**
- ES-401-6, WRITTEN EXAMINATION QUALITY CHECKLIST**



Tennessee Valley Authority, Post Office Box 2000, Soddy-Daisy, Tennessee 37384-2000

February 23, 2007

10 CFR 55.40(b)(3)

Dr. William D. Travers
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, Georgia 30323-8931

Attention: Mr. R. C. Haag

In the Matter of)
Tennessee Valley Authority)

Docket Nos. 50-327
50-328

**SEQUOYAH NUCLEAR PLANT - REACTOR AND SENIOR REACTOR OPERATOR
INITIAL EXAMINATIONS - 05000327/2007301 AND 05000328/2007301**

This letter transmits the reference material identified in NRC's letter to Karl W. Singer dated November 9, 2006, for the examinations to be administrated the week of April 9, 2007.

Due to the administratively confidential nature of the enclosure, it is requested that the information contained in the enclosure be withheld from public disclosure.

Please direct questions concerning this issue to me at (423) 843-7170.

Sincerely,

Glenn W. Morris
Manager, Site Licensing and
Industry Affairs

Enclosure

ENCLOSURE

**TENNESSEE VALLEY AUTHORITY
SEQUOYAH NUCLEAR PLANT (SQN)
UNITS 1 AND 2**

LICENSE EXAMINATION MATERIAL

ENCLOSURE INDEX

1. One copy of the Simulator Examination Guides.
2. One copy of the in-plant and simulator JPMs.
3. One copy of the Admin JPMs.
4. Operating Test Quality Checklist, one page (Form ES-301-3).
5. Simulator Scenario Quality Checklist, two pages (Form ES-301-4).
6. Transient and Event Checklist, one page (Form ES 301-5)
7. Competencies Checklist, one page (Form ES-301-6).

Please contact me with any question you may have.

Randy Evans

Sequoyah Operator Training

(423) 843-4208