

# FINAL ADMINISTRATIVE DOCUMENTS

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## Location of Electronic Files:

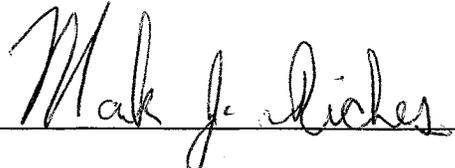
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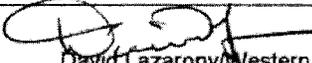
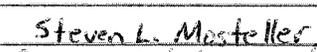
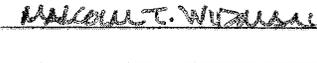
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Submitted By: 

Verified By 

Facility: <u>McGuire Nuclear Station</u>		Date of Examination: <u>05/11/2009</u>
Developed by: Written - Facility <input checked="" type="checkbox"/> NRC ___ // Operating - Facility <input checked="" type="checkbox"/> NRC ___		
Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	11/12/2008
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	01/11/2009
-120	3. Facility contact briefed on security and other requirements (C.2.c)	01/11/2009
-120	4. Corporate notification letter sent (C.2.d)	01/11/2009
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 3)]	02/10/2009
{-75}	6. Integrated examination outlines(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 & f; C.3.d)	02/25/2009
{-70}	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	03/02/2009
{-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 & h; C.3.d)	03/27/2009
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	04/11/2009
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	04/27/2009
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	04/27/2009
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	04/27/2009
-7	13. Written examination and operating tests approved by NRC supervisor (C.2.i; C.3.h)	05/04/2009
-7	14. Final applications reviewed; 1 or 2 (if >10) applications audited to confirm qualifications / eligibility; and examination approval and waiver letters sent (C.2.i; Attachment 5; ES-202, C.2.e; ES-204)	05/04/2009
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee. (C.3.k)	05/04/2009
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	05/04/2009
* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.		
[Applies only] {Does not apply} to examinations prepared by the NRC.		

Facility:	McGuire	Date of Examination:	5/11/09	
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.	FBK	SEM	#
	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.	FBK	SEM	#
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	FBK	SEM	#
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	FBK	SEM	#
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.	DM	SEM	#
	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.	DM	SEM	#
	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.	DM	SEM	#
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.	DM	SEM	#
	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	DM	SEM	#
	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.	DM	SEM	#
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.	DM	SEM	#
	b. Assess whether the 10CFR 55.41/43 and 55.45 sampling is appropriate.	DM	SEM	#
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	DM	SEM	#
	d. Check for duplication and overlap among exam sections.	DM	SEM	#
	e. Check the entire exam for balance of coverage.	DM	SEM	#
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	DM	SEM	#
a. Author	 Printed Name / Signature: David Lazarony / Western Technical Services, Inc.		Date: 2/23/09	
b. Facility Reviewer (*)	 Steven L. Masteller		2/24/09	
c. NRC Chief Examiner (#)	 Gerard W. Lasca		5/4/2009	
d. NRC Supervisor	 Malcolm T. Williams		05/04/09	
NOTE: # Independent NRC reviewer initial items in Column "c", chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines				

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of May 11, May 18, May 25 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 May 11, May 18, May 25. 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. FRED B KIRK JR	SRO / EXAM TEAM LEAD	<i>Fred B Kirk</i>	9-24-08	<i>Fred B Kirk</i>	6-8-09
2. Vickie L. McGinnis	Adm. Spec.	<i>Vickie L. McGinnis</i>	9-24-08	<i>Vickie L. McGinnis</i>	6-2-09
3. H. Clark Fletcher	NRC Exam Team	<i>H. Clark Fletcher</i>	9/24/08	<i>H. Clark Fletcher</i>	5/28/09
4. Steven L. Mosteller	NRC Exam Team	<i>Steven L. Mosteller</i>	11/5/08	<i>Steven L. Mosteller</i>	5/28/09
5. James D. Schell	SRO	<i>James D. Schell</i>	11-13-08	<i>James D. Schell</i>	5/24/09
6. Scott W. Moser	SRO	<i>Scott W. Moser</i>	12-14-08	<i>Scott W. Moser</i>	6/9/09
7. John Suptela	CNS INSTRUCTOR	<i>John Suptela</i>	1-7-09	<i>John Suptela</i>	6-11-09
8. WARREN MOORE	SRO	<i>Warren Moore</i>	1-22-09	<i>Warren Moore</i>	6-2-09
9. Wayne Flynn	RO	<i>Wayne Flynn</i>	1/22/09	<i>Wayne Flynn</i>	6/10/09
10. JASON McALLISTER	SRO	<i>Jason McAllister</i>	1-23-09	<i>Jason McAllister</i>	6/22/09
11. Scott Slieter	RO	<i>Scott Slieter</i>	1-23-09	<i>Scott Slieter</i>	6/2/09
12. MARK BELL	RO	<i>Mark Bell</i>	1-24-09	<i>Mark Bell</i>	7/9/09
13. Sean W. Warren	RO	<i>Sean W. Warren</i>	1/24/09	<i>Sean W. Warren</i>	6/12/09
14. Catherine Hoffman	SRO	<i>Catherine Hoffman</i>	1-25-09	<i>Catherine Hoffman</i>	6-16-09
15. Josh Stroupe	RO	<i>Josh Stroupe</i>	1-29-09	<i>Josh Stroupe</i>	5/24/09

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PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. <u>Melissa Silver</u>	<u>RO</u>	<u>Melissa D. Silver</u>	<u>1-29-09</u>	<u>Melissa D. Silver</u>	<u>6-15-09</u>
2. <u>W.C. Spencer</u>	<u>RP Staff</u>	<u>W.C. Spencer</u>	<u>1-29-09</u>	<u>W.C. Spencer</u>	<u>6-22-09</u>
3. <u>SEVONE F. RAYNES</u>	<u>RO</u>	<u>Sevone F. Raynes</u>	<u>1-31-09</u>	<u>Sevone F. Raynes</u>	<u>6-24-09</u>
4. <u>Kirt Callaway</u>	<u>RO</u>	<u>Kirt Callaway</u>	<u>1-31-09</u>	<u>Kirt Callaway</u>	<u>6-23-09</u>
5. <u>John H. Sadler</u>	<u>SR Ops Specialist</u>	<u>John H. Sadler</u>	<u>2/2/09</u>	<u>John H. Sadler</u>	<u>6/1/09</u>
6. <u>Charles Newman</u>	<u>DCS Validator</u>	<u>Charles Newman</u>	<u>2/4/09</u>	<u>Charles Newman</u>	<u>6-2-09</u>
7. <u>Dennis J. Taylor</u>	<u>Simulator Engineer</u>	<u>Dennis J. Taylor</u>	<u>2/2/09</u>	<u>Dennis J. Taylor</u>	<u>6-2-09</u>
8. <u>David H. Walker</u>	<u>DCS Support</u>	<u>David H. Walker</u>	<u>2/3/09</u>	<u>David H. Walker</u>	<u>6-3-09</u>
9. <u>W. Randy Baker</u>	<u>simulator support</u>	<u>W. Randy Baker</u>	<u>2/3/09</u>	<u>W. Randy Baker</u>	<u>6-2-09</u>
10. <u>S. KUMAR</u>	<u>Sim Support</u>	<u>S. Kumar</u>	<u>2/3/09</u>	<u>S. Kumar</u>	<u>6-9-09</u>
11. <u>MIKE CASHION</u>	<u>OPS STAFF</u>	<u>Mike H. Cashion</u>	<u>2-9-09</u>	<u>Mike H. Cashion</u>	<u>6-10-09</u>
12. <u>Tim Byrd</u>	<u>RO/Procedure Group</u>	<u>Tim Byrd</u>	<u>2-9-09</u>	<u>Tim Byrd</u>	<u>6-2-9</u>
13. <u>Daniel E. McCut</u>	<u>SRO</u>	<u>Daniel E. McCut</u>	<u>2-11-09</u>	<u>Daniel E. McCut</u>	<u>6-26-09</u>
14. <u>DAVID A. NADEAU</u>	<u>SRO</u>	<u>David A. Nadeau</u>	<u>3-4-09</u>	<u>David A. Nadeau</u>	<u>6-22-09</u>
15. <u>STEVEN A. HELMS</u>	<u>ILT SUPERVISOR</u>	<u>Steve Helms</u>	<u>3-5-09</u>	<u>Steve Helms</u>	<u>6-9-09</u>

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	David O'Donnell	Reactor Operator	<i>David O'Donnell</i>	3/30/09	<i>David O'Donnell</i>	5/24/09	
2.	Ken POPE	OPT MANAGER	<i>Ken Pope</i>	3/26/09	<i>Ken Pope</i>	6-9-09	
3.	Newton A. Smith, III	Senior Reactor Operator	<i>Newton A. Smith</i>	4/15/09	<i>Newton A. Smith</i>	6-23-09	
4.	Nathan P. Poston	OPERATIONS Training Instructor	<i>Nathan P. Poston</i>	4/29/09	<i>Nathan P. Poston</i>	6/9/09	
5.	Thurman R. Hall	Reactor Operator	<i>Thurman R. Hall</i>	4/20/09	<i>Thurman R. Hall</i>	6/5/09	
6.	Kenneth Canale	OPS TMC MGT	<i>Kenneth Canale</i>	4/29/09	<i>Kenneth Canale</i>	6/3/09	
7.	STEPHEN N. DYER	CONTRACTOR	<i>Stephen N. Dyer</i>	4/20/09	<i>Stephen N. Dyer</i>	6/3/09	
8.	SCOTT T. FORTIN	REACTOR OPERATOR	<i>Scott T. Fortin</i>	4-29-09	<i>Scott T. Fortin</i>	6-9-09	
9.	Tony Cook	SRO	<i>Tony Cook</i>	4/29/09	<i>Tony Cook</i>	6/2/09	
10.	Kevin Burianek	SRO	<i>Kevin Burianek</i>	4/29/09	<i>Kevin Burianek</i>	6/2/09	
11.	DOUGLAS C WAKEFIELD	REACTOR OPERATOR	<i>Douglas C Wakefield</i>	4/29/09	<i>Douglas C Wakefield</i>	6/2/09	
12.	Joseph Mussey	Shift Ops Manager	<i>Joseph Mussey</i>	5/11/09	<i>Joseph Mussey</i>	6/2/09	
13.	Scott Bradshaw	Training Mgr	<i>Scott Bradshaw</i>	5/11/09	<i>Scott Bradshaw</i>	6/2/09	
14.	TROY R. GARDNER	SRO	<i>Troy R. Gardner</i>	5/11/09	<i>Troy R. Gardner</i>	6/23/09	
15.	Michael J. Brady	Staff Ops Procedures	<i>Michael J. Brady</i>	5/12/09	<i>Michael J. Brady</i>	6/23/09	

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2. Post-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	Garry Hull	OPS TRN INST	Garry Hull	5/13/09	Garry Hull	6/11/09	
2.	Tracy Rhodes	OPS Shift Trn Mgr	Tracy Rhodes	5/22/09	Tracy Rhodes	6/29/09	
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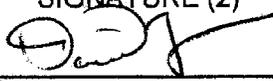
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1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 5/10-22/09 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 5-11/08-09. 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.	David LAZAROVY	Exam Developer		9/23/08		6/19/09	
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1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 5/11-5/25 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	JOSEPH G ARSENAULT	REVIEWER	<i>Joseph G Arsenault</i>	1/6/09	<i>Joseph G Arsenault</i>	6/9/09	
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I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of May 2009 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.

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	Jacqueline Schelkly	Admin	<i>Jacqueline Schelkly</i>	12/29/08	<i>Jacqueline Schelkly</i>	6/19/09	
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NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of **May 11, May 18, May 25** 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 **May 11, May 18, May 25**. 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. FRED B KIRK JR	SRO / EXAM TEAM LEAD	<i>Fred B Kirk</i>	9-24-08		
2. Vickie L. McGinnis	Adm. Spec.	<i>Vickie L. McGinnis</i>	9-24-08		
3. H. Clark Fletcher	NRC Exam Team	<i>H. Clark Fletcher</i>	9/24/08		
4. Steven L. Mosteller	NRC Exam Team	<i>Steven L. Mosteller</i>	11/5/08		
5. James D. Schell	SRO	<i>James D. Schell</i>	11-13-08		
6. Scott W. Moser	SRO	<i>Scott W. Moser</i>	12-14-08		
7. John Suptela	CNS INSTRUCTOR	<i>John Suptela</i>	1-7-09		
8. Warren Moore	SRO	<i>Warren Moore</i>	1-22-09		
9. Wayne Flynn	RO	<i>Wayne Flynn</i>	1/22/09		
10. Jason McAllister	SRO	<i>Jason McAllister</i>	1-23-09		
11. Scott Slieter	RO	<i>Scott Slieter</i>	1-23-09		
12. Mark Bell	RO	<i>Mark Bell</i>	1-24-09		
13. Seelye W. Warren	RO	<i>Seelye W. Warren</i>	1/24/09		
14. Catherine Hoffman	SRO	<i>Catherine Hoffman</i>	1-25-09		
15. Josh Stroupe	RO	<i>Josh Stroupe</i>	1-29-09		

NOTES:

1. Pre-Examination

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2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of **May 11, May 18, May 25**. 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>Melissa Silver</u>	<u>RO</u>	<u>Melissa D. Silver</u>	<u>1-29-09</u>		
2. <u>W.C. Spencer</u>	<u>RP Staff</u>	<u>W.C. Spencer</u>	<u>1-29-09</u>		
3. <u>SEVONE F. RAINES</u>	<u>PO</u>	<u>Sevone F. Raines</u>	<u>1-21-09</u>		
4. <u>Kirt Callaway</u>	<u>RO</u>	<u>Kirt Callaway</u>	<u>1-31-09</u>		
5. <u>John H. Sadler</u>	<u>SR Ops Specialist</u>	<u>John H. Sadler</u>	<u>2/2/09</u>		
6. <u>Charles Newman</u>	<u>DCS Validator</u>	<u>Charles Newman</u>	<u>1/4/09</u>		
7. <u>Dennis D. Taylor</u>	<u>Simulator Engineer</u>	<u>Dennis D. Taylor</u>	<u>2/2/09</u>		
8. <u>David H. Walker</u>	<u>DCS Support</u>	<u>David H. Walker</u>	<u>2/3/09</u>		
9. <u>W. Randy BAKER</u>	<u>simulator support</u>	<u>W. Randy Baker</u>	<u>2/3/09</u>		
10. <u>S. KUMAR</u>	<u>sim support</u>	<u>S. Kumar</u>	<u>2/3/09</u>		
11. <u>MIKE CASHION</u>	<u>OPS STAFF</u>	<u>Mike Cashion</u>	<u>2-9-09</u>		
12. <u>Tim Bird</u>	<u>RO/Procedure Group</u>	<u>Tim Bird</u>	<u>2-9-09</u>		
13. <u>Daniel E. McCutcher</u>	<u>SRO</u>	<u>Daniel E. McCutcher</u>	<u>2-11-09</u>		
14. <u>DAVID A. NADEAU</u>	<u>SRO</u>	<u>David A. Nadeau</u>	<u>2-9-09</u>		
15. <u>STEVEN A. HELMS</u>	<u>ILT SUPERVISOR</u>	<u>Steve Helms</u>	<u>3-5-09</u>		

NOTES:

1. Pre-Examination

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2. Post-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	<u>David O'Donnell</u>	<u>Reactor Operator</u>	<u>David O'Donnell</u>	<u>3/20/09</u>		
2.	<u>KIM POPE</u>	<u>OPT MANAGER</u>	<u>Kim Pope</u>	<u>3/20/09</u>		
3.	<u>Newton A. Smith, III</u>	<u>Senior Reactor Operator</u>	<u>Newton A. Smith</u>	<u>4/15/09</u>		
4.	<u>Nathan P. Poston</u>	<u>OPERATIONS Training Instructor</u>	<u>Nathan P. Poston</u>	<u>4/20/09</u>		
5.	<u>Thurman R. Hall</u>	<u>Reactor Operator</u>	<u>T.R. Hall</u>	<u>4/20/09</u>		
6.	<u>Kenneth Canale</u>	<u>OPS TRNG MSTR</u>	<u>Kenneth Canale</u>	<u>4/20/09</u>		
7.	<u>STEPHEN N. DYER</u>	<u>CONTRACTOR</u>	<u>Stephen N. Dyer</u>	<u>4/20/09</u>		
8.	<u>SCOTT F FORTIN</u>	<u>REACTOR OPERATOR</u>	<u>Scott Fortin</u>	<u>4-23-09</u>		
9.	<u>Tony Cook</u>	<u>SRO</u>	<u>Tony Cook</u>	<u>4/29/09</u>		
10.	<u>Kevin Burianek</u>	<u>SRO</u>	<u>Kevin Burianek</u>	<u>4/29/09</u>		
11.	<u>DOUGLAS C WAKEFIELD</u>	<u>REACTOR OPERATOR</u>	<u>Douglas C Wakefield</u>	<u>4/29/09</u>		
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2. Post-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
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NOTES:

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 5/10-22/08 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	David Lazarony	Exam Developer		9/23/08			
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MCGUIRE NRC

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of May 2009 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.

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	Jacqueline Schelkly	Admin	<i>Jacqueline Schelkly</i>	12/29/08			
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1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 5/11-5/25 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	JOSEPH G ARSENAULT	REVIEWER	<i>Joseph G Arsenault</i>	1/6/09			
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Facility: McGuire (FINAL)	Date of Examination: 5/11/09	
Examination Level: RO	Operating Test Number: N09-1	
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M, R	2.1.25 (3.9) Ability to interpret reference materials, such as graphs, curves, tables, etc. JPM: Determine Boric Acid Addition to FWST
Conduct of Operations	M, R	2.1.7 (4.4) Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation. JPM: Calculate QPTR
Equipment Control	N, S	2.2.44 (4.2) Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions. JPM: Perform Daily Surveillance Items Checklist
Emergency Procedures/Plan	D, S	2.4.39 (3.9) Knowledge of RO responsibilities in emergency plan implementation. JPM: Conduct a Site Assembly
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, (0) (S)imulator, (2) or Class(R)oom (2) (D)irect from bank ( $\leq 3$ for ROs; $\leq 4$ for SROs & RO retakes) (1) (N)ew or (M)odified from bank ( $\geq 1$ ) (3) (P)revious 2 exams ( $\leq 1$ ; randomly selected) (0)		

**RO Admin JPM Summary**

- A1a This is a modified JPM. The operator will be told that a leak, which is now isolated has lowered the FWST level to 440 inches, and that it has been decided to use the Recycle Holdup Tank (RHT) to refill the FWST. The operator will be told that Enclosure 4.4, "FWST Makeup Using the RHT," of OP/1/A/6200/014, "Refueling Water System" is in progress and completed through Step 3.9, and provided with Chemistry Data for the BAT and RHT. The operator will then be directed to determine the amount of Boric Acid needed to raise the FWST level to 480" using the RHT in accordance with Step 3.10 of Enclosure 4.4 of OP/1/A/6200/014, "Refueling Water System." The operator will be expected to calculate the amount of Boric Acid that must be added from the BAT to refill the FWST as 7,912 gallons  $\pm$  75 gallons.
- A1b This is a modified JPM using bank JPM ADM-NRC-A1-004 as its basis. With the plant at 100% power, the operator will be told that the Unit 1 OAC failed and is not operating, and that the crew has implemented PT/1/A/4600/021A, Loss of Operator Aid Computer while in Mode 1. The operator will be directed to calculate QPTR in accordance with Enclosure 13.5, Part A of PT/1/A/4600/21A Loss of Operator Aid Computer while in Mode 1. The operator will be expected to calculate QPTR, and determine that Technical Specification 3.2.4, Quadrant Power Tilt Ratio, has been exceeded.
- A2 This is a new JPM. The operator will be told that Unit 1 and Unit 2 are in Mode 1 at 100% power, and provided with a just completed portion of PT/1/A/4600/003B, "Daily Surveillance Items," that reflects those items NOT simulated. The operator will be directed to perform Enclosure 13.1, Daily Surveillance Items Checklist in accordance with PT/1/A/4600/003B. The operator will be required to identify four items on the Checklist that do not meet the identified acceptance criteria, and one item that requires CRSRO notification.
- A4 This is bank JPM ADM-NRC-A4-005. The operator will be told that Unit 1 was at 100% power when it experienced a loss of electrical power, that an ALERT has been declared, and that a Site Assembly is required. The operator will be directed to conduct a Site Assembly in accordance with Step 1 of Enclosure 4.3, OSM Actions for Site Assembly, of RP/0/A/5700/011, "Conducting a Site Assembly, Site Evacuation or Containment Evacuation." The operator will be expected to inform the Security Department that a Site Assembly is being performed, determine whether or not the Card Reader System is functioning properly, turn the Outside Page Speakers on, operate the Site Assembly alarm, make announcements pertinent to a Site Assembly, and direct the Security Department to ensure that the Site Assembly is thorough.

Facility: McGuire <b>(FINAL)</b>	Date of Examination: 5/11/09	
Examination Level: SRO	Operating Test Number: N09-1	
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M, R	2.1.25 (4.2) Ability to interpret reference materials, such as graphs, curves, tables, etc.
		JPM: Determine Boric Acid Addition to FWST
Conduct of Operations	N, R	2.1.5 (3.9) Ability to use procedures related to shift staffing, such as minimum compliment overtime limitations, etc.
		JPM: Determine Proper Shift Staffing
Equipment Control	N, R	2.2.42 (4.6) Ability to recognize system parameters that are entry level conditions for Technical Specifications.
		JPM: Perform Daily Surveillance Items Checklist
Radiation Control	M, R	2.3.6 (3.8) Ability to approve release permits.
		JPM: Approve a Gaseous Waste Release Permit
Emergency Procedures/Plan	N, R	2.4.41 (4.6) Knowledge of emergency action level thresholds and classifications.
		JPM: Classify an Emergency Event
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, (0) (S)imulator, (0) or Class(R)oom (5) (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (0) (N)ew or (M)odified from bank (≥ 1) (5) (P)revious 2 exams (≤ 1; randomly selected) (0)		

**SRO Admin JPM Summary**

- A1a This is a modified JPM. The operator will be told that a leak, which is now isolated has lowered the FWST level to 440 inches, below the Technical Specification Limit, and that it has been decided to use the Recycle Holdup Tank (RHT) to refill the FWST. The operator will be told that Enclosure 4.4, "FWST Makeup Using the RHT," of OP/1/A/6200/014, "Refueling Water System" is in progress and completed through Step 3.10, and provided with Chemistry Data for the BAT and RHT. The operator will then be directed to perform the Separate Verification of the calculation in Step 3.10 of Enclosure 4.4 to determine the amount of Boric Acid that must be added from the Boric Acid Tank (BAT), in order to raise the FWST Level to 480" using the RHT. The operator will discover two errors within the RO's calculation, and determine the correct volume of Boric Acid to add. Following this, the operator will be given a makeup flowrate to the FWST and asked to identify the impact on the Technical Specification ACTION. The operator will be required to identify that ACTION C is applicable after one hour.
- A1b This is a new JPM that combines elements of two bank JPMs, ADM-NRC-A1-001 and ADM-NRC-A1-010. The operator will be told that Units 1 and 2 are at 100% power and that it is a specific time and date. The operator will be provided with a Work Schedule of personnel that are reporting for work, and told that three individuals have expressed concerns regarding overtime limitations, and present their recent work history. After being provided a work history for those that have expressed concerns, the operator will be directed to evaluate the work history of the three individuals who have expressed overtime limitation concerns; and then assign personnel to a shift position on Attachment 12.1, Control Room Supervisor Turnover Checklist, in accordance with the attached Work Schedule. The operator will directed to identify any arriving personnel that cannot be assigned to a shift position; and to hold over personnel and/or call in additional personnel ONLY if the minimum staffing cannot be met. The operator will be expected to evaluate the work history of three individuals in accordance with section 200.6 of NSD 200, and determine that one RO cannot report for work, however, the other individuals with work history concerns may report for work. The operator will also be expected to assign all other personnel reporting to work in accordance with an attached Key, identifying that that STA must be held over from the previous shift, and that one RO must be held over, or a Request for Work Hours Extension must be approved.
- A2 This is a new JPM. The operator will be provided with a completed Enclosure 13.1, "Daily Surveillance Items Checklist" of PT/1/A/4600/003B, as well as a completed Enclosure 13.2, "NAC-UMS Cask Monitoring" of PT/1/A/4600/003B and directed to evaluate the completed Enclosures in accordance with PT/1/A/4600/003B, and identify all Technical Specification/SLC required ACTION, as well as all other actions that must be taken. The operator will need to evaluate the four discrepancies discovered against the Technical

Specifications and Selected Licensee Commitments, and identify all required actions.

- A3 This is a modified JPM using bank JPM ADM-NRC-A3-001 as its basis. The operator will be told that Unit 1 and Unit 2 are in Mode 1 at 100% power, that OP/0/A/6200/019, Enclosure 4.1, Waste Gas Decay Tank Release to Unit Vent, is in progress in preparation for release of the C WGDT, and completed through Step 3.11, and that RP has just delivered the GWR package # 2009010 to the Control Room. The operator will be directed to review and approve GWR Package # 2009010 for the C Waste Gas Decay Tank by performing Step 3.12 of Enclosure 4.1 of OP/0/A/6200/019, Waste Gas Decay Tank Release. The operator will be expected to discover three errors in the submitted release package, and delay approval of the package until the errors are corrected.
- A4 This is a new JPM. The operator will be given a timeline of events that span a few hours, and asked to classify the event at the point where each procedure identifies a need to address RP/0/A/5700/000, Classification of Emergency. The operator will be expected to recognize that an Unusual Event is declared at the first procedure direction, the Unusual Event is updated at the second procedure direction, and that a Site Area Emergency exists upon entry into the EOP network.

Facility:	McGuire	<b>(FINAL)</b>	Date of Examination:	5/11/09
Exam Level (circle one):	<i>RO (only) / SRO(I) / SRO (U)</i>		Operating Test No.:	N09-1
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.	004 Chemical and Volume Control System Emergency Borate the Reactor Coolant System Using the PD Pump	S, D, A	1	
b.	<b>006 Emergency Core Cooling System</b> <b>Align the ND, NI, and NV Systems to Cold Leg Recirculation</b>	<b>S, D, A, EN</b>	<b>2</b>	
c.	<b>010 Pressurizer Pressure Control System</b> <b>Place LTOP in Service</b>	<b>S, D, L</b>	<b>3</b>	
d.	059 Main Feedwater System Establish Feedwater Flow to the S/G's Following a Reactor Trip	S, D	4S	
e.	028 Hydrogen Recombiner and Purge Control System Manually Align Phase B HVAC Equipment	S, N, EN	5	
f.	<b>064 Emergency Diesel Generators</b> <b>Perform Diesel Generator Operability Test</b>	<b>S, N, A</b>	<b>6</b>	
g.	015 Nuclear Instrumentation System Restore Repaired Power Range Channel to Service	S, D, A	7	
h.	<i>008 Component Cooling Water System</i> <i>Place Standby Component Cooling Train in Operation</i>	<i>S, D</i>	<i>8</i>	
In-Plant Systems® (3 for RO; 3 for SRO-I; 3 or 2 for <b>SRO-U</b> )				
i.	<b>APE 054 Loss of Main Feedwater</b> <b>Reset Unit 2 Turbine Driven CA Pump Stop Valve per Generic Enclosure 24</b>	<b>D, R, E</b>	<b>4S</b>	
j.	<b>APE 065 Steam Loss of Instrument Air</b> <b>Aligning Nitrogen To Supply Control Air to D, E and F VI Compressors</b>	<b>D, A, E</b>	<b>8</b>	
k.	APE 058 Loss of DC Power Swap Battery Charger EVCA Power Supply from Unit 1 to Unit 2	D, R, E	6	

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

### JPM Summary

JPM A This is bank JPM PS-NV-200A. The operator will be told that Unit 1 was at 100% power with "A" NV pump tagged for maintenance, when a failure of an automatic reactor trip occurred causing entry into EP/1/A/5000/FR-S.1, Response to Nuclear Power Generation/ATWS. The operator will be directed to emergency borate the NC System per Step 5 of EP/1/A/5000/FR-S.1. During the course of the procedure implementation the operator will discover that the "B" NV Pump has tripped (Alternate Path). The operator will be expected to place the PD pump in service in accordance with EP/1/A/5000/G-1, Generic Enclosures, Enclosure 17, PD Pump Startup, and complete the emergency boration.

JPM B This is Bank JPM-ECC-NI-116A. The Operator will be placed in a post-Large Break LOCA situation at Unit 1 with the FWST trending toward Cold Leg Recirculation Switchover Criteria. The operator will be told that the unit is presently implementing EP/1/A/5000/E-1, Loss of Reactor or Secondary Coolant. The operator will be asked to monitor FWST level and perform transfer to Cold Leg Recirculation at the appropriate time. During the transfer to Cold Leg Recirculation in accordance with EP/1/A/5000/ES-1.3, Transfer to Cold Leg Recirculation, 1NI-184B, RB Sump to Train B ND & NS, will fail to open, and the B ND Pump will need to be stopped (Alternate Path). The operator will place the A Train of ND, NI and NV on Cold Leg Recirculation.

JPM C This is a bank JPM. The Operator will be placed in a situation in which Unit 1 is in a cooldown and depressurization in accordance with OP/1/A/6100/SD-4, "Cooldown to 240 Degrees F." The operator will be told that the 1A and 1B NCPs are operating, that NC System pressure is 340 psig and NC System temperature is 306-312°F. The operator will be asked to place the LTOP System in operation in accordance with Enclosure 4.1 of OP/1/A/6100/SO-10, "Controlling Procedure for LTOP Operation," and monitor for proper operation.

JPM D This is bank JPM CF-CF-036. The operator will be told that Unit 1 has experienced a Reactor Trip, that EP/1/A/5000/ES-0.1, "Reactor Trip Response," has been completed through step 11, total feed flow to S/G's is < 450 gpm, that no CA Pumps are running or available, and that CF Isolation has not occurred. The operator will be directed to place

the 1A CF Pump in service, and establish CF to the S/G's in accordance with Enclosure 4 of EP/1/A/5000/ES-0.1. The operator will be expected to place the 1A CF Pump in service and provide feedwater flow to all four S/G's.

**JPM E** This is a new JPM. The operator will be told that they are the Unit 2 BOP, and that Unit 1 has experienced a Large Break LOCA. The operator will be directed to check Phase B HVAC equipment in accordance with Enclosure 2, "Phase B HVAC Equipment," of EP/1/A/5000/E-0, "Reactor Trip or Safety Injection." During the performance of Enclosure 2, the operator will recognize that neither train of the VE and VX Systems automatically started. The operator will be expected to manually start the both Trains of VE and VX Systems.

**JPM F** This is a new JPM. The operator will be told that Unit 1 is operating at 100% power, that a monthly test of the 1B Emergency Diesel Generator is required, and that the System Engineer wants to start and stop the Diesel from the Control Room. The operator will be directed to conduct a Slow Start of the 1B Emergency Diesel Generator using Enclosure-13.1 of PT/1/A/4350/002B, "Diesel Generator 1B Operability Test." During the performance of Enclosure 13.1, a sudden loss of crankcase vacuum will be indicated together with a loss of engine speed (Alternate Path). The operator will be expected to stop the engine with the normal stop switch.

**JPM G** This is a bank JPM. The Operator will be placed in a situation with Unit 1 at 100% power. The operator will be told that Power Range Channel N43 has previously failed high, and that the channel has been defeated in accordance with AP/1/A/5500/16, "Malfunction of Nuclear Instrumentation," Case III, "Power Range Malfunction." The operator will be asked to restore Power Range Channel N43 to service in accordance with Step 22 of AP16, "Malfunction of Nuclear Instrumentation," Case III, "Power Range Malfunction." During the restoration, N43 will fail a second time, rendering this an Alternate Path JPM. The operator will be required to use, an Annunciator Response/Abnormal Response Procedure and place Rod Control manual.

**JPM H** This is bank JPM PSS-KC-029. The operator will be told that Unit 1 is in a post-trip situation with "A" train RN and KC in service, and that 1A1 KC pump has tripped on overcurrent and will not restart. The crew has implemented AP/1/A/5500/21, "Loss of KC or KC System Leakage," and has completed step 8. The operator will be directed to start the standby KC train starting at Step 9 of AP/1/A/5500/21. The operator will be expected to place the B Train of KC in service, and place the A Train of KC in standby.

**JPM I** This is Bank JPM CF-CA-248. The Operator will be told that the Unit 2 reactor has tripped due to a loss of all offsite power, that 2ETA and 2ETB are deenergized, that the crew has entered EP/2/A/5000/ECA-0.0, "Loss of All AC Power," and that the "TD CA PUMP STOP VLV NOT OPEN" alarm (2AD-5, F-3) is lit. The operator will be directed to reset the stop valve PER EP/2/A/5000/G-1, "Generic Enclosures," Enclosure 24, "Resetting TD CA Stop Valve." The operator will be expected to reset 2SA-3 in accordance with Generic Enclosure 24.

**JPM J** This is bank JPM SS-VI-110A. The operator will be told that a total loss of VI has occurred. The operator will be directed to perform AP/1/A/5500/22, "Loss of VI, Enclosure 6, "D, E, and F VI Compressor Operation With Low Control Air." During the implementation of Enclosure 6, the operator will discover that the Breathing Air (VB) Compressors are tripped, and that another strategy will need to be implemented to

restore VI System pressure (Alternate Path). The operator will be expected to align Nitrogen from backup cylinders to D, E, and F VI compressors with pressure set between 90-100 psig.

JPM K This is bank JPM EL-EPL-166T. The operator will be told that Unit 1 has just experienced a Loss of Offsite Power, that the 1A D/G will not start, and that 1ETA is de-energized. AP/1/A/5500/07, "Loss of Electrical Power," Case 1 has been implemented. The operator will be directed to swap power supplies to the EVCA Battery Charger from Unit 1 to Unit 2 in accordance with AP/1/A/5500/07, "Loss of Electrical Power," Enclosure 22, Swapping Battery Charger Power Supplies." The operator will be expected to place Battery Charger EVCA in service with power being supplied from Unit 2 within 20 minutes of dispatch. This is a Time Critical JPM.

Facility: McGuire	Date of Examination: 5/11/09	Operating Test Number: N09-1
<b>1. GENERAL CRITERIA</b>		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).	DL	SM      JH
b. There is no day-to-day repetition between this and other operating tests to be administered during this examination.	DL	SM      JH
c. The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	DL	SM      JH
d. Overlap with the written examination and between different parts of the operating test is within acceptable limits.	DL	SM      JH
e. It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	DL	SM      JH
<b>2. WALK-THROUGH CRITERIA</b>		-      -      -
a. Each JPM includes the following, as applicable: * 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: - 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	DL      SM      JH	
b. Ensure that any changes from the previously approved systems and administrative walk-through outlines (Forms ES-301-1 and 2) have not caused the test to deviate from any of the acceptance criteria (e.g., item distribution, bank use, repetition from the last 2 NRC examinations) specified on those forms and Form ES-201-2.	DL	SM      JH
<b>3. SIMULATOR CRITERIA</b>		-      -      -
The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.		DL      SM      JH
	Printed Name / Signature	Date
a. Author	David Lazarony, Western Technical Services, Inc.	4/23/09
b. Facility Reviewer (*)	Steven Masteller, MNS operations	4/28/09
c. NRC Chief Examiner (#)	GERARD W. LASKA	5/04/2009
d. NRC Supervisor	MICHAEL T. WIDMANN	05/04/09
NOTE:	* The facility signature is not applicable for NRC-developed tests.	
	# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.	

Facility: McGuire Date of Exam: 5/11/09 Scenario Numbers: 1 2 3 Operating Test No.: N09-1

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.	DM	SM	AF					
2.	The scenarios consist mostly of related events.	DM	SM	AF					
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	DM	SM	AF					
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.	DM	SM	AF					
5.	The events are valid with regard to physics and thermodynamics.	DM	SM	AF					
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	DM	SM	AF					
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.	DM	SM	AF					
8.	The simulator modeling is not altered.	DM	SM	AF					
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.	DM	SM	AF					
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.	DM	SM	AF					
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	DM	SM	AF					
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).	DM	SM	AF					
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	DM	SM	AF					
Target Quantitative Attributes (Per Scenario; See Section D.5.d)				Actual Attributes			-	-	-
				1	2	3			
1.	Total malfunctions (5-8)	8	8	10					
2.	Malfunctions after EOP entry (1-2)	1	2	4					
3.	Abnormal events (2-4)	4	3	3					
4.	Major transients (1-2)	1	1	1					
5.	EOPs entered/requiring substantive actions (1-2)	1	1	0					
6.	EOP contingencies requiring substantive actions (0-2)	0	1	2					
7.	Critical tasks (2-3)	3	2	3					

Facility:		McGuire		Date of Exam:		5/11/09		Operating Test No.:		N09-1							
A P P L I C A N T	E V E N T  T Y P E	Scenarios															
		N09-1-1			N09-1-3			_____			_____			T O T A L	M I N I M U M (*)		
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N						
		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
RO-3	RX													0	1	1	0
	NOR		1				4							2	1	1	1
	I/C		2,4				2,3							4	4	4	2
	MAJ		6				7							2	2	2	1
	TS													0	0	2	2
RO-4	RX			1										1	1	1	0
	NOR					1								1	1	1	1
	I/C			3,5		5,6								4	4	4	2
	MAJ			6		7								2	2	2	1
	TS													0	0	2	2
RO-5	RX													0	1	1	0
	NOR		1				4							2	1	1	1
	I/C		2,4				2,3							4	4	4	2
	MAJ		6				7							2	2	2	1
	TS													0	0	2	2
RO-6	RX			1										1	1	1	0
	NOR					1								1	1	1	1
	I/C			3,5		5,6								4	4	4	2
	MAJ			6		7								2	2	2	1
	TS													0	0	2	2

Instructions:

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

Facility:		McGuire		Date of Exam:		5/11/09		Operating Test No.:		N09-1							
A P P L I C A N T	E V E N T  T Y P E	Scenarios															
		N09-1-1			N09-1-3			_____			_____			T O T A L	M I N I M U M (*)		
		CREW P O S I T I O N			CREW P O S I T I O N			CREW P O S I T I O N			CREW P O S I T I O N						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	R	I	U	
SROU-1	RX													0	1	1	0
	NOR	1			1									2	1	1	1
	I/C	2,3, 4,5			2,3, 4,5, 6									9	4	4	2
	MAJ	6			7									2	2	2	1
	TS	3,4, 5			2,3, 5									6	0	2	2
SROU-2	RX													0	1	1	0
	NOR	1			1									2	1	1	1
	I/C	2,3, 4,5			2,3, 4,5, 6									9	4	4	2
	MAJ	6			7									2	2	2	1
	TS	3,4, 5			2,3, 5									6	0	2	2
RO-1	RX													0	1	1	0
	NOR		1				4							2	1	1	1
	I/C		2,4				2,3							4	4	4	2
	MAJ		6				7							2	2	2	1
	TS													0	0	2	2
RO-2	RX			1										1	1	1	0
	NOR					1								1	1	1	1
	I/C			3,5		5,6								4	4	4	2
	MAJ			6		7								2	2	2	1
	TS													0	0	2	2

Instructions:

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

Facility: McGuire		Date of Examination: 5/11/09				Operating Test No.: N09-1						
Competencies	APPLICANTS											
	SRO (U/I)				RO/ATC				BOP			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	1-7	1-8	1-3, 5-10		1,2,4, 6,7	2,3,5, 6	1,5,6, 7,8,9, 10		1,3,5, 6,7	1,2,4, 6,7, 8	2,3,4, 7,8, 9, 10	
Comply With and Use Procedures (1)	1-7	1-8	1-10		1,2,4, 6,7	2,3,5, 6	1,5,6, 7,8,9, 10		1,3,5, 6,7	1,2,4, 6,7, 8	2,3,4, 7,8, 9, 10	
Operate Control Boards (2)	NA	NA	NA		1,2,4, 6,7	2,3,5, 6	1,5,6, 7,8,9, 10		1,3,5, 6	1,2,4, 6,7, 8	2,3,4, 7,8, 9, 10	
Communicate and Interact	1-7	1-8	1-10		1-7	1-8	1-10		1-7	1-8	1-10	
Demonstrate Supervisory Ability (3)	1-7	1-8	1-10		NA	NA	NA		NA	NA	NA	
Comply With and Use Tech. Specs. (3)	3,4,5	1,4	2,3,5		NA	NA	NA		NA	NA	NA	
Notes:												
(1) Includes Technical Specification compliance for 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.*

Facility: McGuire Nuclear Station		Date of Exam: 5/22/09		Exam Level: RO <input type="checkbox"/> SRO <input type="checkbox"/>		
Item Description	Initial					
	a	b*	c#			
1. Questions and answers are technically accurate and applicable to the facility.	JK	SEM	JK			
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	JK	SEM	JK			
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	JK	SEM	JK			
4. The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL program office).	JK	SEM	JK			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input checked="" type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input type="checkbox"/> the examinations were developed independently; or <input type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)	JK	SEM	JK			
6. Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank	Modified	New	JK	SEM	JK
	37/6	10/4	28/15			
7. Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/ analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory	C/A		JK	SEM	JK
	33/14 12	42/11 13				
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	JK	SEM	JK			
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.	JK	SEM	JK			
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	JK	SEM	JK			
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with the value on the cover sheet.	JK	SEM	JK			
			Printed Name / Signature	Date		
a. Author	Fred B Kirk Jr. / Duke Energy <i>Fred B Kirk Jr.</i>			4/30/09		
b. Facility Reviewer (*)	Steven L Mosteller / Duke Energy <i>Steven L Mosteller</i>			4/30/09		
c. NRC Chief Examiner (#)	GERARD W. GIBSON <i>Gerard W. Gibson</i>			5/14/2009		
d. NRC Regional Supervisor	MALCOLM T. WIDJANA <i>Malcolm T. Widjana</i>			05/04/09		
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.						

FINAL

Facility: <i>McGuire</i>		Date of Exam: <i>MAY 2008</i>															
Tier	Group	RO K/A Category Points											SRO-Only Points				
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total	
1. Emergency & Abnormal Plant Evolutions	1	3	3	3	N/A			3	3	N/A			3	18	3	3	6
	2	1	2	2	N/A			2	1	N/A			1	9	2	2	4
	Tier Totals	4	5	5	N/A			5	4	N/A			4	27	5	5	10
2. Plant Systems	1	2	3	4	2	3	1	3	2	3	2	3	28	3	2	5	
	2	1	1	1	1	1	1	1	0	1	1	1	10	2	1	3	
	Tier Totals	3	4	5	3	4	2	4	2	4	3	4	38	5	3	8	
3. Generic Knowledge and Abilities Categories					1	2	3	4	10				1	2	3	4	7
					3	3	2	2					1	2	2	2	

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

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
007EK1.06	Reactor Trip - Stabilization - Recovery / 1	3.7	4.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relationship of emergency feedwater flow to S/G and decay heat removal following reactor trip
				Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)										
008AK3.05	Pressurizer Vapor Space Accident / 3	4	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ECCS termination or throttling criteria
				Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)										
009EK3.21	Small Break LOCA / 3	4.2	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions contained in EOP for small break LOCA/leak
				Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)										
011EK3.14	Large Break LOCA / 3	4.1	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RCP tripping requirement
				Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)										
015AA2.11	RCP Malfunctions / 4	3.4	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	When to jog RCPs during ICC
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
022AK1.03	Loss of Rx Coolant Makeup / 2	3	3.4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relationship between charging flow and PZR level
				Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
025AK2.01	Loss of RHR System / 4	2.9	2.9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RHR heat exchangers
<i>REPLACED WITH 025AK2.02</i>		Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)												
029EA2.04	ATWS / 1	3.2	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CVCS centrifugal charging pump operating indication
		Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)												
040AG2.1.31	Steam Line Rupture - Excessive Heat Transfer / 4	4.6	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to locate control room switches, controls and indications and to determine that they are correctly reflecting the desired plant lineup.
		This is a Generic, no stem statement is associated.												
054AA1.04	Loss of Main Feedwater / 4	4.4	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HPI, under total feedwater loss conditions
		Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)												
055EK2.04	Station Blackout / 6			<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pumps
<i>REPLACED WITH OSSEAI-06</i>		Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)												
056AG2.4.35	Loss of Off-site Power / 6	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects
		This is a Generic, no stem statement is associated.												

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
057AA2.09	Loss of Vital AC Inst. Bus / 6	3.1	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	T-ave. and T-ref. chart recorder
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
058AA1.03	Loss of DC Power / 6	3.1	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vital and battery bus components
				Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)										
062AG2.2.40	Loss of Nuclear Svc Water / 4	3.4	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Ability to apply technical specifications for a system.
				This is a Generic, no stem statement is associated.										
065AA1.01	Loss of Instrument Air / 8	2.7	2.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Remote manual loaders
				Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)										
077AK2.07	Generator Voltage and Electric Grid Disturbances / 6	3.6	3.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Turbine / Generator control
				Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)										
WE11EK1.2	Loss of Emergency Coolant Recirc. / 4	3.6	4.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal, abnormal and emergency operating procedures associated with (Loss of Emergency Coolant Recir).
				Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
003AK3.10	Dropped Control Rod / 1	3.2	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RIL and PDIL
				Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)										
028AA1.07	Pressurizer Level Malfunction / 2	3.3	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Charging pumps maintenance of PZR level (including manual backup)
				Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)										
051AG2.4.11	Loss of Condenser Vacuum / 4	4.0	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of abnormal condition procedures.
				This is a Generic, no stem statement is associated.										
068AK2.02	Control Room Evac. / 8	3.7	3.9	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor trip system
				Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)										
WE03EA1.3	LOCA Cooldown - Depress. / 4	3.7	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Desired operating results during abnormal and emergency situations.
				Ability to operate and / or monitor the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)										
WE07EK1.3	Saturated Core Cooling Core Cooling / 4	3.2	3.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Annunciators and conditions indicating signals, and remedial actions associated with the (Saturated Core Cooling).
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
WE08EK2.1	RCS Overcooling - PTS / 4	3.4	3.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features.
				Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)										
WE09EK3.2	Natural Circ. / 4	3.2	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Normal, abnormal and emergency operating procedures associated with (Natural Circulation Operations).
				Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)										
WE16EA2.1	High Containment Radiation / 9	2.9	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.
				Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
003K1.03	Reactor Coolant Pump	3.3	3.6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RCP seal system
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)										
004K5.50	Chemical and Volume Control	2.6	2.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Design basis letdown system temperatures: resin integrity
				Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)										
005K6.03	Residual Heat Removal	2.5	2.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RHR heat exchanger
				Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)										
006A3.06	Emergency Core Cooling	3.9	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Valve lineups
				Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)										
007A2.05	Pressurizer Relief/Quench Tank	3.2	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exceeding PRT high-pressure limits
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
007K5.02	Pressurizer Relief/Quench Tank	3.1	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Method of forming a steam bubble in the PZR
				Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
008K3.03	Component Cooling Water	4.1	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RCP
				Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)										
010A4.01	Pressurizer Pressure Control	3.7	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PZR spray valve
				Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)										
012A1.01	Reactor Protection	2.9	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Trip setpoint adjustment
				Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)										
012K3.01	Reactor Protection	3.9	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CRDS
				Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)										
013K2.01	Engineered Safety Features Actuation	3.6	3.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ESFAS/safeguards equipment control
				Knowledge of electrical power supplies to the following:(CFR: 41.7)										
022K1.04	Containment Cooling	2.9	2.9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chilled water
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)										
022K2.02	Containment Cooling	2.5	2.4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chillers
				Knowledge of electrical power supplies to the following:(CFR: 41.7)										

Replaced with  
022K 4.03

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
025K5 01	Ice Condenser	3.0	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Relationships between pressure and temperature Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)
026G2.1.32	Containment Spray	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to explain and apply all system limits and precautions. This is a Generic, no stem statement is associated.				
039G2.2.38	Main and Reheat Steam	3.6	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of conditions and limitations in the facility license. This is a Generic, no stem statement is associated.				
059A4.03	Main Feedwater	2.9	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Feedwater control during power increase and decrease Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)				
061A2.05	Auxiliary/Emergency Feedwater	3.1	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automatic control malfunction Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)				
062A3.05	AC Electrical Distribution	3.5	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Safety-related indicators and controls Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)				
062G2.2.39	AC Electrical Distribution	3.9	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of less than one hour technical specification action statements for systems. This is a Generic, no stem statement is associated.				

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
063A3.01	DC Electrical Distribution	2.7	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Meters, annunciators, dials, recorders and indicating lights
				Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)										
063K2.01	DC Electrical Distribution	2.9	3.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Major DC loads
				Knowledge of electrical power supplies to the following:(CFR: 41.7)										
064K4.11	Emergency Diesel Generator	3.5	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Automatic load sequencer: safeguards
				Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)										
073A1.01	Process Radiation Monitoring	3.2	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation levels
				Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)										
073K3.01	Process Radiation Monitoring	3.6	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radioactive effluent releases
				Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)										
076A1.02	Service Water	2.6	2.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor and turbine building closed cooling water temperatures.
				Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)										
078K3.02	Instrument Air	3.4	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Systems having pneumatic valves and controls
				Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)										

KA      NAME / SAFETY FUNCTION:      IR      K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G      TOPIC:

RO      SRO

103K4.01      Containment

3.0      3.7     

Vacuum breaker protection

REPLACED WITH  
103K4.06

Knowledge of (SYSTEM) design feature(s)  
and or interlock(s) which provide for the  
following:(CFR: 41.7)

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
011A3.03	Pressurizer Level Control	3.2	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Charging and letdown Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)
015K5.02	Nuclear Instrumentation	2.7	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Discriminator/compensation operation Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)
017K6.01	In-core Temperature Monitor	2.7	3.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sensors and detectors Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)
027K2.01	Containment Iodine Removal	3.1	3.4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fans Knowledge of electrical power supplies to the following:(CFR: 41.7)
028K3.01	Hydrogen Recombiner and Purge Control	3.3	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hydrogen concentration in containment Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)
033G2.4.31	Spent Fuel Pool Cooling	4.2	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of annunciators alarms, indications or response procedures This is a Generic, no stem statement is associated.
034K1.02	Fuel Handling Equipment	2.5	3.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RHRS Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
071A1.06	Waste Gas Disposal	2.5	2.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ventilation system
				Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)										
079A4.01	Station Air	2.7	2.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Cross-tie valves with IAS
				Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)										
086K4.02	Fire Protection	3.0	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Maintenance of fire header pressure
				Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
G2.1.1	Conduct of operations	3.8	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of conduct of operations requirements.
				This is a Generic, no stem statement is associated.										
G2.1.27	Conduct of operations	3.9	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of system purpose and or function.
				This is a Generic, no stem statement is associated.										
G2.1.37	Conduct of operations	4.3	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of procedures, guidelines or limitations associated with reactivity management
				This is a Generic, no stem statement is associated.										
G2.2.17	Equipment Control	2.6	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the process for managing maintenance activities during power operations.
				This is a Generic, no stem statement is associated.										
G2.2.4	Equipment Control	3.6	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(multi-unit) Ability to explain the variations in control board layouts, systems, instrumentation and procedural actions between units at a facility.
				This is a Generic, no stem statement is associated.										
G2.2.40	Equipment Control	3.4	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to apply technical specifications for a system.
				This is a Generic, no stem statement is associated.										
G2.3.14	Radiation Control	3.4	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities
				This is a Generic, no stem statement is associated.										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
G2.3.4	Radiation Control	3.2	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiation exposure limits under normal and emergency conditions
				This is a Generic, no stem statement is associated.										
G2.4.39	Emergency Procedures/Plans	3.9	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the RO's responsibilities in emergency plan implementation.
				This is a Generic, no stem statement is associated.										
G2.4.45	Emergency Procedures/Plans	4.1	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to prioritize and interpret the significance of each annunciator or alarm.
				This is a Generic, no stem statement is associated.										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
007EG2.4.35	Reactor Trip - Stabilization - Recovery / 1	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects
				This is a Generic, no stem statement is associated.										
008AA2.10	Pressurizer Vapor Space Accident / 3	3.6	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High-pressure injection valves and controllers
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
022AG2.4.4	Loss of Rx Coolant Makeup / 2	4.5	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.
				This is a Generic, no stem statement is associated.										
025AA2.07	Loss of RHR System / 4	3.4	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pump cavitation
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
027AA2.03	Pressurizer Pressure Control System Malfunction / 3	3.3	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Effects of RCS pressure changes on key components in plant
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
062AG2.1.31	Loss of Nuclear Svc Water / 4	4.6	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to locate control room switches, controls and indications and to determine that they are correctly reflecting the desired plant lineup.
				This is a Generic, no stem statement is associated.										

REPLACED WITH  
062AG 2.1.32

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
003AG2.4.11	Dropped Control Rod / 1	4.0	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of abnormal condition procedures.
				This is a Generic, no stem statement is associated.										
051AA2.02	Loss of Condenser Vacuum / 4	3.9	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Conditions requiring reactor and/or turbine trip
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
WE15EA2.2	Containment Flooding / 5	2.9	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.
				Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
we16EG2.4.41	High Containment Radiation / 9	2.9	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the emergency action level thresholds and classifications.
				This is a Generic, no stem statement is associated.										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
004G2.1.20	Chemical and Volume Control	4.6	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to execute procedure steps.
				This is a Generic, no stem statement is associated.										
012G2.1.32	Reactor Protection	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to explain and apply all system limits and precautions.
				This is a Generic, no stem statement is associated.										
063A2.02	DC Electrical Distribution	2.3	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of ventilation during battery charging
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
076A2.01	Service Water	3.5	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Loss of SWS
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
078A2.01	Instrument Air	2.4	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Air dryer and filter malfunctions
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
034G2.4.11	Fuel Handling Equipment	4.0	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of abnormal condition procedures.
				This is a Generic, no stem statement is associated.										
072A2.02	Area Radiation Monitoring	2.8	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Detector failure
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
086A2.03	Fire Protection	2.7	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inadvertent actuation of the FPS due to circuit failure or welding
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
G2.1.5	Conduct of operations	2.9	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to locate and use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc.
				This is a Generic, no stem statement is associated.										
G2.2.11	Equipment Control	2.3	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the process for controlling temporary design changes.
				This is a Generic, no stem statement is associated.										
G2.2.3	Equipment Control	3.8	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(multi-unit license) Knowledge of the design, procedural and operational differences between units.
				This is a Generic, no stem statement is associated.										
	<i>REPLACED WITH G 2.2.40</i>													
G2.3.12	Radiation Control	3.2	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiological safety principles pertaining to licensed operator duties
				This is a Generic, no stem statement is associated.										
G2.3.14	Radiation Control	3.4	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities
				This is a Generic, no stem statement is associated.										
G2.4.20	Emergency Procedures/Plans	3.8	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of operational implications of EOP warnings, cautions and notes.
				This is a Generic, no stem statement is associated.										
G2.4.23	Emergency Procedures/Plans	3.4	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the bases for prioritizing emergency procedure implementation during emergency operations.
				This is a Generic, no stem statement is associated.										



(FINAL)

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

Instructions

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

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

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
76	H	2											X	E	<p><b>051AA2.02</b> The question appears to match the K/A. The licensee's statement that the question must have actions associated with a required turbine and Reactor trip is not totally correct. The question should test either/or. If an operator understood that the turbine trip setpoint has been exceeded (RO knowledge) distractors A and B would be discounted. If the operator further understood that the condenser would no longer be available for steam dump operation (RO Knowledge) then distractor C would be discounted. Leaving only D as a possible correct answer. Therefore, this is not an SRO only level question. Rewrote question, changed stem and distractors. Closer to SRO only. Must use other items besides procedure entry requirements, no trip setpoints have been reached yet. Will allow. SAT.</p> <p><b>NEW SAT4/1/2009</b></p>
77	F	2												S	<p><b>012G2.1.32</b> Question appears to match K/A. Appears to be SRO only.</p> <p><b>NEW SAT</b></p> <p><b>Very Wordy will look at changes to make less wordy on validation. SAT 4/1/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
78	H	2												U	<p><b>G2.2.3</b> Question appears to match K/A. This is systems knowledge. This question on the 2007 McGuire NRC exam was an RO question, the only difference is the realignment to the SNSWP which is in all distractors. Need to write at the SRO level. Listed as <b>BANK</b></p> <p><b>May need another K/A. 4/1/2009</b></p> <p><b>G2.2.22 or G2.2.40</b></p> <p><b>Will look at rewrite.</b></p>
79	F	2												E	<p><b>003AG2.4.11</b> Question appears to match K/A. Is this operationally valid. Does McGuire have reduced axial offset? If so it would be very difficult to actually exceed tech spec limits on a drop of one control rod. I understand that this is a step in the procedure. I am just not sure that it is operationally valid will discuss.</p> <p><b>NEW</b></p> <p><b>Changed stem to state required actions IAW AP-14. SAT 4/1/2009</b></p>
80	H	2												S	<p><b>076A2.01</b> Question appears to match K/A. Appears to be SRO only.</p> <p><b>MODIFIED SAT</b></p> <p><b>SAT 4/1/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
81	H	2											X	X	U	<p><b>WE15EA2.2</b> Question does not totally match the K/A (adherence to appropriate procedures) will get a second opinion. Not SRO only this question can be answered using systems knowledge. Knowledge that a LOCA and a Feed line break has occurred will rule out A and B. Knowing the limit for sump level in containment (12.5 feet) appears to be systems knowledge. Again I will get a second opinion.</p> <p><b>NEW</b>  <b>Continue to work on question 4/1/2009</b>  <b>Also has two correct answers as written.</b>  <b>Added only to distractors C and D. this makes D wrong. SAT 4.24.2009.</b></p>
82	H	2				X									E	<p><b>008AA2.10</b> Question kind of matches K/A. Appears to be SRO only. With the conditions in the stem an entry into C.1 is not warranted. The distractor analysis states this. However the correct answer marked is C which states that an entry into C.1 is required. With CETs at 586°F entry into C.1 is not really plausible unless there are other conditions that direct entry. To make C.1 plausible temperature should be closer to 700 °F (maybe even exceeding it but then RVLIS level should be greater than the value that would require entry into C.1. Will discuss</p> <p><b>NEW</b>  <b>Made changes to stem (increased RCS temp to 705 degrees, and RVLIS to 45%. This made C.1 distractors more plausible. Also increased Subcooling to indication limit.</b>  <b>NOW SAT 4/1/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
051 83	H	2											?	E	<b>022AG2.4.2</b> Question appears to match the K/A. Borderline SRO, I believe that this can be answered with systems knowledge but will have another examiner review the question and verify. <b>NEW</b> <b>Made changes to stem SAT 4/1/2009</b>
84	F	2												S	<b>G2.4.20</b> Question appears to match the K/A, and appears to be SRO only. <b>NEW SAT</b>
85	H	2												E	<b>004G2.1.20</b> Question appears to match the K/A. Appears to be SRO only. Not sure if the correct answer listed is totally correct. The procedure states <b>EVALUATE</b> starting the Standby makeup pump using enclosure 3. The correct answer listed states: <b>Start the standby pump immediately.</b> These are not consistent. <b>NEW</b> <b>Changed stem and all distractors. Added per enclosures.</b> <b>SAT 4/1/2009</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
86	F	2	X											E	<p><b>G2.1.5</b> Question appears to match the K/A. The question appears to be SRO only. Should not the STA also have an active SRO license? The Technical Specification does not speak to this. I do not think that 10CFR50 allows an STA (that does not have an active license) to fill that position. Will Discuss.</p> <p><b>NEW</b>  <b>Added Active to stem. SAT 4/1/2009</b></p>
87	F	2											X	E	<p><b>2.3.14</b> Question appears to match the K/A. If this is taught in Rad worker training then it is not SRO knowledge. At most sites this is taught in RAD worker training. Will review McGuire Rad worker training to verify.</p> <p><b>BANK</b>  <b>Made change to be in accordance with RP-04. This made the question more SRO only. SAT 4/1/2009</b></p>
88	F	2												S	<p><b>G2.3.12</b> Question may not match the K/A. It appears to be SRO only. Will get a second opinion on K/A match. Second opinion on K/A match is that is kind of matches K/A. (So its okay)</p> <p><b>BANK</b>  <b>SAT 4/1/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
89	H	2												S	<p><b>WE16G2.4.41</b> Question appears to match K/A. Questions appears to be SRO only. Containment radiation level is above the entry conditions for entry into Z.3. Will allow as is.</p> <p><b>BANK SAT SAT 4/1/2009</b></p>
90	F	2												S	<p><b>G2.2.11</b> Question appears to match K/A. Question appears to be SRO only.</p> <p><b>BANK SAT 4/1/2009</b></p>
91	H	2				X								U	<p><b>034G2.4.11</b> Question appears to match K/A. May be SRO only, Distractors B, C, and D do not appear to be plausible. The original question had more plausible actions. The actions (procedure selection is Okay) do not appear to be plausible for the annunciators that have come into alarm.</p> <p><b>BANK 2003 CATAWBA NRC</b></p> <p><b>Rework using a actual fuel handling piece of equipment.</b></p> <p><b>Added an alarm for ctmt sump to make the correct answer clearer and remove doubt from stem.</b></p> <p><b>SAT 4/28/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
92	F	2												E	<p>086A2.03 Question matches K/A. Appears to be SRO only. (not very discriminating) In reading your distractor analysis you state that this room is different that's why Condition A is applicable. But a continuous fire watch is always required when welding is present. Will Discuss</p> <p><b>NEW</b>  <b>Removed welding from the stem and added maintenance is being performed.</b>  <b>SAT 4/1/2009</b></p>
93	H	2												U	<p>G2.4.23 Question does not meet the K/A. There is not a priority asked for in the stem. The question is basically asking how are NS pumps operated in ECA 1.1. There is also way too much information in the stem. There is also teaching (complete procedure flow path is given) so no prioritization takes place.</p> <p><b>BANK</b>  <b>Changed stem and all Distractors, however there are still two correct answers B and D.</b>  <b>Still work to be done. 4/1/2009</b>  <b>SAT 4.24.2009.</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
94	H	2											X	S	<p><b>072A2.02</b> Question appears to match K/A. Borderline SRO I will have another examiner review. I understand that the sensitivity is in the SLC Basis document, but is it also common knowledge in the lesson plan? If not it is probably SRO only.</p> <p><b>MODIFIED 2008 McGuire NRC EXAMINATION</b> Change the non correct distractors to 5 gpd, then <b>SAT 4/1/2009</b></p>
95	F	2											X	E	<p><b>063A2.02</b> Question appears to match the K/A. I believe 4% is the standard flammability limit for H2. With the 2% number coming from the basis document this may be SRO only knowledge. I will have another examiner review. This is a fundamental level question (applicant must recall two actions and both are immediate (RO knowledge) and recall some design basis information.</p> <p><b>NEW</b> <b>Changed limit to volume limit in the battery room. Changed to 4%.</b> <b>SAT 4/1/2009</b></p>
96	H	2												S	<p><b>025AA2.07</b> Question appears to match the K/A. Appears to be SRO only. Not Very Discriminating.</p> <p><b>NEW SAT</b></p>
97	H	2												S	<p><b>078A2.01</b> Question appears to match K/A. Appears to be SRO only.</p> <p><b>NEW</b> <b>SAT 4/1/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
98	H	2				X	X						X	U	<p><b>027AA2.07</b> Question appears to match the K/A. Not sure this is SRO only. A could also be considered correct. C and D have reasons, A does not. I will have another operator look at to ensure it is SRO only.</p> <p><b>BANK</b>  <b>Still to Work 4/1/2009</b>  <b>SAT 4/24/42009.</b></p>
99	H	2				X							X	E	<p><b>062AG2.1.31</b> Question appears to match K/A. Distractor B is not plausible, why would you initiate another train of phase B and then go to the AP? Does not appear to be SRO only. Knowledge of valves that close on a phase B is RO knowledge, Procedure entry is RO knowledge, and knowledge of how to use Abnormal and Emergency procedures is RO knowledge.</p> <p><b>NEW</b>  <b>Gerry to supply NEW K/A. 062AG2.1.32 or G2.1.20</b>  <b>Use of the word preferred, need to limit this as much as we can. New question uses precaution and limitation basis documentation and the lineup causes a degradation in SW flow, although this is a borderline match for the K/A will allow. Otherwise SAT 4.28.2009.</b></p>
100	H	2				X							X	E	<p><b>007EG2.4.35</b> Question appears to match the K/A. Borderline SRO will have another examiner review to ensure question is SRO only. Distractors C and D do not appear to be plausible from the information you submitted with the question. The times listed in the procedure are 30 minutes, the times in the question distractors are 37.5 min, and 1 hour 15 min.</p> <p><b>NEW</b>  <b>Times are for actual time critical actions.</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																<b>Reduced information in all distractors. SAT 4/1/2009</b>

**10 Sats, 5 Unsats, and 10 Enhancements**

(FINAL)

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

Instructions

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

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

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
1	H	2	X											E	007EK1.06 Question appears to match K/A. Were RCPs secured due to loss of RN? Actually the first bullet does not add anything to the question (is not needed) if bullet two informs the operator that the NC pumps were secured. Move the answers around so that B is not the correct answer (as it is in the bank question) <b>BANK 2007 Harris NRC Exam</b> <b>Changed stem</b> <b>SAT 4/1/2009</b>
2	H	2												S	001EK3.14 Question appears to match K/A. <b>BANK</b> <b>SAT</b> <b>SAT 4/1/2009</b>
3	H	2				X								E	003K1.03 Question appears to match K/A. The distractors have three parts to them. The applicant need only know two parts and can arrive at the correct answer. (#1 seal leakoff goes down, and NCDT level rises) the only distractor with these indications is B. The standpipe level alarm is not required to be known to answer this question. Need to limit the number of parts of the distractor to two. Also some how we need to state that all of the items listed in the distractors are from the 1B NC pump <b>BANK</b> Removed the NCDT reference in all distractors. <b>SAT 4/1/2009</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
4	F	2											X		E	007K5.02 Not sure if this matches the K/A. If the Reactor vessel head vents discharge to the PRT/Quench tank, then it matches K/A if not then it does not. It appears from your explanation that it does not so the K/A is not matched. May need to change the K/A. I will get another examiners opinion prior to changing the K/A. <b>BANK 2005 McGuire NRC EXAM</b> Head Vents do go to the PRT, so question is okay. <b>SAT 4/1/2009</b>
5	H	2													S	012A1.01 Question kind of matches K/A. <b>BANK 2005 McGuire NRC Exam</b> <b>SAT</b>
6	F	1													U	G2.1.1 Question appears to match the K/A. Not very discriminating. <b>BANK 2005 McGuire NRC Exam</b> <b>Will Replace</b> <b>4/1/2009</b> <b>Replaced Question. Distractor A appears to be correct. 4/23/2009.</b> <b>SAT 2.24.2009.</b>
7	H	2													S	040AG2.1.3 Question appears to match K/A. <b>NEW</b> <b>SAT</b> Made changes due to two correct answers found on validation.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
8	H	2											X		U	<p><b>008AK3.05</b> Question does NOT meet the K/A. The K/A asks for the reasons for the SI termination criteria. There are no reasons in this question. Furthermore there is way too much information on this page. Need to develop another question that matches the K/A, and does not have this much information on the page.</p> <p>In this question criteria is not met so are we really testing any reasons? This question is listed as bank, is the question in the bank exactly like this?</p> <p><b>BANK</b>  <b>Still to work on using two criteria/adverse numbers.</b>  <b>Will continue to work. SAT 4.24.2009.</b></p>
9	H	2				X									U	<p><b>009EK3.21</b> Question kind of matches K/A. Distractors B and C do not appear to be plausible. Saving borated water in CLA in case the reactor goes critical again? With a safety injection in progress? Why would anyone pick distractor B while in ES-1.2? The boron in the CLA is not much different than the boron in the RWST, but you have not isolated it? Need to rewrite.</p> <p><b>BANK 2005 McGuire NRC Exam</b>  After changes this will be SAT.  <b>4/23/2009. SAT</b></p>
10	H	2													S	<p><b>064K4.11</b> Question appears to match K/A.  <b>BANK SAT</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
11	H	2											X		E	054AA1.04 Question kind of matches the K/A. It would have been a better match to ask a question about indications that high pressure injection was in service/being effective. Will let another examiner look at before making a decision. <b>NEW</b> Will allow K/A and question Changed order of distractors due to validation. Answer changed to C. <b>SAT 4/1/2009</b>
12	H	2													S	WE09EK3.2 Question appears to match K/A. <b>NEW SAT</b>
13	H	2													E	058AA1.03 Question appears to match K/A. Need to explain distractors A and B. These may be plausible, but your explanation is not complete enough for me to understand if they are plausible or not. <b>BANK</b> B distractor okay, will replace A. <b>4/1/2009</b> <b>Changed to Unit 2 b train SAT 4/23/2009</b>
14	F	1													E	004K5.50 Question appears to match K/A. Distractors C and D may not be plausible. The reason for bypassing the demineralizers to protect the VCT from high temperature may not be plausible. <b>NEW</b> Changed distractors B, C, and D. <b>SAT 4/1/2009</b>
15	H	2													S	<b>008K3.03</b> Question kind of matches K/A. This is more of an effect of a phase B on the RCPS. I understand that this is how CCW is lost but we really don't ask about the effect on RCPS. <b>BANK SAT</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
16	F	1	X				X								E	<p><b>010A4.01</b> Question appears to match K/A. Distractor B does not appear to be plausible. D Should read Manually energize back up heaters to... Are these actions in accordance with a procedure (AOP or ARP)? If so, the stem should state IAW ... Your KA match statement states that the operator is required to determine that the spray valve is failed open, however you give this data in the stem. This question as written is not very discriminating. The question is also a fundamental level question because all the operator needs is to remember the actions to take if a spray valve fails open. Needs to be enhanced.</p> <p><b>NEW</b>  <b>Replaced some stem and distractors (B and D)</b>  <b>Removed words.</b>  <b>SAT 4/1/2009</b></p>
17	H	2													S	<p><b>062AG2.2.40</b> Question appears to match K/A.  <b>NEW SAT</b></p>
18	F	2													S	<p><b>WE11EK1.2</b> Question appears to match K/A.  <b>NEW SAT</b></p>
19	F	2													E	<p><b>073K3.01</b> Question appears to match K/A. Use a fourth bullet and state that power is lost to 1EMF-38L. Then: Which one of the following describes the components that will receive an automatic action based on this lost? VQ only, VQ and VP etc.</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															<b>BANK 1999 McGuire NRC EXAM Made Changes as Requested. SAT 4/1/2009</b>
20	H	2												S	<b>022AK1.03</b> Question appears to match K/A. Are these conditions operationally valid? Would not the actions in the plant have the operator control excess letdown flow to maintain pressurizer level? I know that you have procedures to deal with this and I do not believe that you would allow this to happen. Please Explain. Explanation Okay, verify numbers.  <b>MODIFIED</b>  <b>SAT 4/1/2009</b>
21	H	2		X										E	<b>015K5.02</b> Question appears to match K/A. The explanation for D is much more in-depth than the other distractors. This makes a test taker tend to believe it is the correct answer. (and in this case it is) Need to change distractor D to be more like distractor C. Source range will not energize... <b>BANK</b> <b>Changed distractor D to be more like C</b> <b>SAT 4/2/2009</b>
22	F	2		X										E	<b>039G2.2.38</b> Question appears to match K/A. With two distractors with the setpoint of 1170, an operator would discount both A and D. Use two distractors with 1170 as the first number, and one of the others like 1190. The same for the second number. With 15# between most setpoints, use 1190 and 1235 for one of the distractors etc. <b>BANK</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															<b>Changed as requested SAT 4/2/2009</b>
23	F	2												S	<b>026G2.1.32</b> Question appears to match K/A. <b>NEW SAT SAT 4/2/2009</b>
24	F	2												S	<b>062G2.2.39</b> Question appears to match K/A. <b>NEW SAT</b> <b>Changed distractor C to be more like D. SAT 4/2/2009</b>
25	H	2				X								E	<b>051AG2.4.11</b> Question appears to match K/A. Distractor D is not plausible. (Would not mitigate the event, it just would not matter any more). Remove the Trip the turbine and just leave the "Open Exhaust Hood Sprays. This will not improve vacuum. It will lower the exhaust hood temperature. <b>NEW</b> <b>Removed turbine trip D is now correct. SAT 4/2/2009</b>
26	F	2					X							E	<b>086K4.02</b> Question appears to match K/A. Recommend changing the A and B jockey pumps to lead and standby as you have it stated in the question explanation. This is a lot of information for the applicants to read. <b>BANK</b> <b>Changed to STBY and Lead SAT 4/2/2009</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
27	F	2				X								E	<p><b>063K2.01</b> Question appears to match K/A, if you assume that the Back up Vapor extractor is a major DC load. 1CXA is also a 125 VDC bus and 1DP is a 250 volt bus. Is there not another DC bus with the same voltage? Distractors B and D may not be plausible. Will discuss.</p> <p><b>NEW</b>  <b>Will rewrite question. 4/2/2009</b>  <b>This is a 125V valve/power supply and only one item is 125V. Need to fix distractors, all are 250V. 4/23/2009.</b>  <b>Made changes. SAT 2.24.2009.</b></p>
28	F	2										X		U	<p><b>029EA2.04</b> Does the direction to close the mini flow valves only apply to S.1? If so, then the question will match the K/A. If this is a generic system operating parameter then it does not match the K/A. The top of the stem could be removed and the applicant asked, WOOTF describes the maximum allowed NV flow-rate, and the value of NC system pressure that the mini-flow valve are closed.... This is a systems knowledge question as written, and is not really tied to FRP-S.1.</p> <p><b>NEW</b>  <b>Will attempt to write new question based on PORV step of S.1 or something similar SAT4/23/2009.</b></p>
29	H	2				X								E	<p><b>028AA1.07</b> Question appears to match the K/A. Again you are testing three items in the distractors, and the applicant need only know 2 of the 3 to get the correct answer. Need to only</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
															have two items in the distractors. <b>MODIFIED</b> Changed distractors all A, B and D licensee requested 3 items and we tried to make it flow as appropriate for the charging flow. SAT 4/2/2009
30	F	2	X											E	<b>WE03EA1.3</b> Question kind of matches the K/A. As written, three of the distractors contain reasons. The correct answer does not contain reasons. The K/A does not ask for reasons, and the question does not ask for reasons. Need to add reasons to the stem and distractor A, or remove all of the reasons. (I understand that they are there to increase plausibility.) <b>NEW</b> Removed all reasons, and changed stem. SAT 4/2/2009
31	H	2				X								E	<b>022K1.04</b> Question appears to match K/A. Distractor A should state "C" RV pump (if this is the only RV pump that will be running after the LOOP If it does not have power, we will have to look at different wording. If none of the RV pumps get emergency power then you should have listed the pumps that normally run). Distractor D, pump should be plural Pumps. <b>BANK</b> Changed A distractor and added (s) SAT 4/2/2009

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
32	H	2		X										E	<p><b>027K2.01</b> Question appears to match K/A. Why not change the last bullet to state containment pressure has just reached 3 psig. Get rid of phase B statement and have the distractors state 1B VE fan will be running. 1A and 1B will be running 1B VE fan will start in 10 min etc. The phase B terminology could be viewed as a cue.</p> <p><b>NEW</b>  <b>Changed stem and all distractors</b>  <b>SAT 4/2/2009</b></p>
33	F	2	X											E	<p><b>077AK2.07</b> Question appears to match K/A. Stem should read: Which one of the following describes the reason that Turbine First Stage Impulse pressure is reduced to less than 340 psig prior to opening the Switchyard PCBs in accordance with AP-5? The lesson plan provided has the number listed as 360 psig.</p> <p><b>BANK</b>  <b>Made changes as requested</b>  <b>SAT 4/2/2009</b></p>
34	H	2				X								E	<p><b>015AA2.11</b> Question appears to match K/A. Distractor D does not appear to be plausible. (with NI and NV unavailable how could you start feed and bleed) I think this was one of the questions you sent me earlier and I said it was okay. It still is okay, but with further review it appears that with the conditions in the stem it is not plausible.</p> <p><b>MODIFIED</b>  <b>Changed Distractor D as requested.</b>  <b>SAT 4/2/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
35	H	2												S	<b>005K6.03</b> Question appears to match the K/A. <b>MODIFIED SAT</b> <b>SAT 4/2/2009</b>
36	H	2												E	<b>055EA1.06</b> Question appears to match the K/A. The stem is a little confusing considering a time line. What happens first the LOCA, LOOP and 2B diesel failure? What are the conditions that we are asking for in the answers (if any other SIs' or auto starts occur? <b>BANK</b> <b>Made changes as requested.</b> <b>SAT 4/2/2009</b>
37	H	2												S	<b>003AK3.10</b> Question appears to match K/A. <b>MODIFIED SAT</b> <b>SAT 4/2/2009</b>
38	H	2												S	<b>006A3.06</b> Question appears to match K/A. <b>BANK SAT</b> <b>SAT 4/2/2009</b>
39	F	2	X											E	<b>068AK2.02</b> Question appears to match K/A. Teaching in the stem. Have a bullet state AP-17 Loss of control room has been entered. Which ONE of the following describes the reason why the operator at the reactor trip breakers shall not trip the reactor until directed to do so by the SRO at the ASP? <b>BANK</b> <b>SAT 4/2/2009</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
40	F	2	X			X								E	<p><b>078K3.02</b> Question appears to match the K/A. Is 1NV-35A an indication that is listed in a procedure? If it is then it is okay, but if it is not, it really only informs the operator that air pressure has lowered to the point that the valve has went closed. Distractor A does not appear to be plausible. It is normally closed. Question needs some enhancements. Will Discuss.</p> <p><b>NEW</b>            Changed stem  <b>SAT 4/2/2009</b></p>
41	H	2												S	<p><b>011A3.03</b> Question appears to match K/A.  <b>BANK SAT</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
42	F	2					X							E	<p><b>056AG2.4.35</b> Question appears to match K/A. I believe that B is also correct. There have been several instances where this has occurred in actual operating plants that have had a loss of power. While your background document states that the thermal barrier is isolated to prepare the plant for recovery while protecting the CCW system from steam formation due to RCP thermal barrier heating. This heating will cause steam formation in the thermal barrier. When the CCW pumps are started the steam in the thermal barrier will compress as system pressure rises causing a water hammer. The information in yellow does state that the steam will be flushed into the rest of the CCW system but it states that a an abnormal seal leakage would have to be present to exceed the cooling capacity of the CCW flow to that pump generating more steam to be swept in to the system. I feel that an applicant could argue that either B or C is correct.</p> <p><b>BANK</b></p> <p><b>Is this not a JPM performed at your site? This is a very important task. I will get the opinion of another examiner before deciding what to do. Changed distractor analysis, this is the reason for isolation, so we capitalized ISOLATION so that is would not be confused with restoring. After much discussion SAT 4/2/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
43	H	2												E	<p><b>WE07EK1.3</b> Question appears to match K/A. Distractor A is not plausible as written. If you actually had saturated conditions, why would no additional actions be required? Does ES-1.2 direct the operators to use enclosed reference Enclosure 4.3 curve 1.10B of OP/1/A/6100/22? If not then this would be a hint to the operator that this was included, therefore it must be used. Need to discuss.</p> <p><b>NEW</b>  <b>Add new actions for A and B</b>  <b>Will look at after completion.</b>  <b>SAT 2.24.2009.</b></p>
44	H	2					X					X		U	<p><b>WE08EK2.1</b> Not sure if this meets the K/A. I believe the K/A is assuming that you already have conditions that have placed the plant in the FRPs. Also in the bank question that you submitted, distractor C was listed as one way to halt the cooldown, is this also correct?</p> <p><b>MODIFIED</b>  <b>Will replace question</b>  <b>Rewrote question SAT 2.24.2009.</b></p>
45	H	2												S	<p><b>Question number 45 in the presented material is the same as question # 72</b></p> <p><b>012K3.01</b> Question appears to match the K/A.  <b>BANK SAT</b>  <b>SAT 4/2/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
46	H	2												E	<p><b>033G2.4.31</b> Question appears to match K/A. What are the switch positions for the KF pumps? Typically if there is an on-off switch the pump does not auto-start on any condition. If there is not an auto position on the switch then it is probably not a plausible distractor. The material you sent describes a Start/Stop switch, Will discuss.</p> <p><b>NEW</b>  <b>Pump gets a permissive to start, but not an auto signal</b>  <b>SAT 4/2/2009</b></p>
47	H	2				X								E	<p><b>G2.2.40</b> Question appears to match K/A. Not sure distractor A is plausible. I do not know of a time that at least one charging pump is required to be operable. (are we talking NI pumps or NV pumps) Which ever one it is we need to use that terminology.</p> <p><b>BANK</b>  <b>Add subsystems to all distractors and change distractor A to be one RHR and Both Charging.</b>  <b>SAT 4/2/2009</b></p>
48	F	2										X		U	<p><b>WE16EA2.1</b> Question does not meet the K/A. WE16 refers to high containment radiation in the accident mode. And this question refers to conditions in containment during refueling. Need to write a question that matches the K/A.</p> <p><b>BANK</b>  <b>Will write a new question.</b>  <b>SAT 4/23/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
49	F	2				X								E	<p><b>071A1.06</b> Question appears to match the K/A. Distractor C EMF-36 does not have a title after it, all of the others do. Not sure about the plausibility of distractor A. Needs further explanation. Fundamental level question.</p> <p><b>BANK</b>  <b>After discussion decided that A was acceptable added name for EMF-36.</b>  <b>SAT 4/2/2009</b></p>
50	F	2										X		E	<p><b>G2.1.37</b> Question kind of matches K/A. A better K/A match would be what administrative controls are maintained in the control room that the Reactor Operator must adhere to. Will discuss</p> <p><b>BANK</b>  <b>Will rewrite question to better satisfy K/A.</b>  <b>SAT 5/23/2009</b></p>
51	F	2				X								E	<p><b>G2.1.27</b> Question appears to match K/A. D may be a subset of B. If the setpoint is &lt;385 psig, then &lt; 365 also meets this. May need to reword the distractors or stem.</p> <p><b>BANK</b>  <b>Changed all distractors.</b>  <b>SAT 4/2/2009</b></p>
52	F	2	X											E	<p><b>079A4.01</b> Question appears to match K/A. Need to add a statement like Air systems are in their normal lineups.</p> <p><b>BANK</b>  Removed U1 shutdown in a refueling outage from stem. (Air systems are in normal line up.)  <b>SAT 4/2/2009</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
53	F	2												S	<b>034K1.02</b> Question appears to match the K/A. <b>BANK SAT</b>
54	F	2												S	<b>028K3.01</b> Question appears to match K/A. <b>BANK SAT</b>
55	H	2	X			X								U	<b>007A2.05</b> Question kind of matches K/A. Distractors C and D are not plausible. These are a combination of the actual cooling methods and the applicant need not determine that a cooldown is not required, but that the methods are not correct. The stem also states that the PRT has just been cooled down. It should state that following conditions exist in the PRT and allow the operator to understand what parameter is exceeded and what actions need to be performed in accordance with a procedure. (Procedure needs to be listed. (OP/1(2)/A6150/004) <b>BANK</b> Will rewrite using cooldown that can be performed. <b>4/2/2009</b> <b>Made Changes SAT 4/23/2009</b>
56	H	2	X											E	<b>013K2.01</b> Question appears to match K/A. Is some of the "B" train ECCS equipment running? One could claim that there is not a correct answer because (with the B train components in service) B train components would still be operating. Need to change the stem to ask which train of ECCS equipment will get an auto start signal from the sequencer or something to that effect. <b>MODIFIED</b> <b>Made changes to auto start signal.</b> <b>SAT4/2/2009</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
57	H	2				X								U	<p><b>025K5.01</b> Question appears to match the K/A. Distractors A and B are not plausible. 3 psig is a very low pressure and is the point that a phase "B" initiates, why would anyone think that this is the design pressure. It might be better to use the design bases accident. If the pressure for implementing Z.1 based on a red path is greater than 3 psig, then maybe this number could be used. Will discuss.</p> <p><b>NEW</b>  <b>After discussion left question as is. Much discussion on 3 psig and many things happening at this pressure. SAT 4/2/2009</b></p>
58	H	1	X	X		X						X		U	<p><b>059A4.03</b> Question kind of matches K/A. Teaching in stem. Should not have statements like "best" in the stem. Use "correctly describes". This question better fits the K/A's that refer to a main feedwater malfunction or what will happen on a P-14 signal. Will get another operator to review.</p> <p><b>BANK</b>  Will write another question.  <b>4/2/2009</b>  <b>SAT 4/23/2009</b></p>
59	F	2												S	<p><b>062A3.05</b> Question appears to match the K/A.  <b>BANK SAT</b></p>
60	F	2												S	<p><b>063A3.01</b> Question appears to match the K/A.  <b>BANK2007 McGuire NRC EXAM. SAT</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
61	H	2											X		U	<p><b>025AK2.02</b> Question kind of matches the K/A. Will get another examiner to verify. Question is somewhat confusing. Does any other hot leg loop have SI flow or recirc flow? If not (I cannot tell from the documentation) then A could also be correct. If an ND train is aligned for spray, will it also be aligned for hot leg recirc?</p> <p><b>BANK</b> (This has NRC 1027 after it, what does that mean?)</p> <p>Write new question on RHR. 4/2/2009 SAT 4/23/2009</p>
62	F	2													S	<p><b>103K4.06</b> Question appears to match the K/A. <b>BANK SAT</b></p>
63	H	2					X								S	<p><b>017K6.01</b> Question appears to match the K/A. After reading the documentation provided I am still not sure that a 20 °F temperature increase will yield an exact 20 °F temperature indication decrease.</p> <p><b>NEW</b> Procedure supports above. SAT 4/2/2009</p>
64	H	2													S	<p><b>065AA1.01</b> Question appears to match the K/A. <b>NEW SAT</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
65	F	2				X								E	<p><b>G2.3.4</b> Question appears to match the K/A. Not sure about the plausibility of Distractors A, C, and D. Will have another examiner look at the question. C and D distractors are actually measuring the same thing (extremities). D is a subset of C. Sent question to 4 other examiner. Administrative limits are more site specific, maybe this question could be asked using site admin limits. <b>(Check to see if this is an appealed question)</b></p> <p><b>MODIFIED</b></p> <p><b>Changed (deleted the given items in the stem SAT 4/2/2009)</b></p>
66	F	2	X											E	<p><b>073A1.01</b> Question appears to match K/A. The stem lists the radiation monitors as 1 EMF 38.39, and 40. Is 1 EMF 38.39 one monitor? If you swap the sample point for one does it swap the sample point for all? It appears (but is not totally clear) that this is the case. Will discuss.</p> <p><b>NEW</b></p> <p><b>After discussion and correct labeling of monitors determined to be SAT4/2/2009</b></p>
67	H	2	X			X						X		U	<p><b>076A1.02</b> Question may or may not meet the K/A, I need to determine if we are testing reactor building or turbine building closed loop cooling systems. From the information that you have given me it appears we are testing the RN effect on the KC system. The drawings that were included were for the Unit 1 RN system. The question stem refers to Unit 2 RN system. The analysis on distractor A states that if the trains were not split, this would be the correct answer. I don't think that if you increase flow to the KC heat exchanger that you will lower containment temperature, in fact it should rise</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
																because flow would be taken away from it. I may have this all wrong, please explain. (I got the correct answer by just seeing what valve was adjusted and by looking for a component that was cooled by this valve.) <b>NEW</b> <b>Rewrote question SAT4/2/2009</b>
68	F	2												S		<b>G2.4.39</b> Question appears to match the K/A. <b>MODIFIED SAT</b>
69	H	2	X			X								E		<b>G2.3.14</b> Question kind of matches the K/A. Why does the stem state a Male worker... Is it different for a female? Distractor C has backward logic/language in it. <b>BANK</b> <b>Rewrite question C is correct also 4/2/2009</b> <b>Rewrote distractor C. 4/23/2009</b>
70	H	2	X											E		<b>057AA2.09</b> Question may match K/A. Does EVCA supply power to first stage turbine impulse pressure, and N-41? If so, why can you not leave power removed? By using the failed conditions of these instruments the question would then meet the K/A. If the instruments are not powered form EVCA then the K/A is not matched. <b>MODIFIED</b> <b>Take question back to work on. 4/2/2009</b> <b>Continued to work, changed question so that control rods moved and D was correct answer. SAT 4/23/2009</b>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
71	F	1												U	<p><b>G2.2.17</b> Question appears to match the K/A. This question is not discriminating. Try listing a component in the stem and having the applicant determine what color should be applied.</p> <p><b>BANK</b>  <b>Continue to work.</b>  <b>4/2/2009</b>  <b>SAT 4/23/2009</b></p>
72	H	2	X			X								U	<p><b>G2.4.45</b> Question appears to match the K/A. Distractor D is not plausible. In the stem it is stated that reactor power is at 45%, why would you have to reduce power? What procedure would this be in accordance with? With power at 45% would this be an ATWS as stated in the distractor analysis? It appears as written that there is not a correct answer.</p> <p><b>BANK</b>  <b>Rewrote question May have been a typo will investigate</b>  <b>4/2/2009</b>  <b>Still working SAT 4/23/2009</b></p>
73	F	2												S	<p><b>G2.2.4</b> Question appears to match K/A.  <b>NEW SAT</b></p>
74	H	2												S	<p><b>022K4.03</b> Question appears to match K/A.  <b>NEW SAT</b></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
75	H	2											X		U	<p><b>061A2.05</b> Question does not appear to meet the K/A. If the operator can take these actions with out the use of a procedure then the K/A is not met. Need to ask a question where procedures direct the actions to mitigate/control the consequences of the malfunction.</p> <p><b>NEW</b>  <b>Need to ask question in a different way the way it is asked now, there is really no procedure guidance to do this. 4/2/2009</b>  <b>Still needs work. 4/23/2009</b>  <b>Tied question to Operations Management Expectations to close valves immediately.</b>  <b>Matches K/A. SAT 4/29/2009</b></p>

25 Sats, 14 Unsats, and 36 Enhancements

**Generic Comments: All bank or modified questions should have the answers rotated from original (i.e. if the answer was originally A, swap the correct answer to B, C, or D.**

Facility: McGuire 2009-301		Date of Exam: 05/22/09		Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	MAB	N/A	JK		
2. Answer key changes and question deletions justified and documented	MAB	N/A	JK		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	MAB	N/A	JK		
4. Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail	MAB	N/A	JK		
5. All other failing examinations checked to ensure that grades are justified	MAB	N/A	JK		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	MAB	N/A	JK		
Printed Name/Signature		Date			
a. Grader	MARK A. BATES / <i>Mark A. Bates</i>		06/15/2009		
b. Facility Reviewer(*)	N/A		N/A		
c. NRC Chief Examiner (*)	GEORGE W. LISKA / <i>George W. Liska</i>		06/17/2009		
d. NRC Supervisor (*)	MALCOLM T. WIDMANN / <i>Malcolm T. Widmann</i>		06/18/09		
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

Facility: <u>McGuire</u>		Date of Exam: <u>5-22-09</u> Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>		
Item Description	Initials			
	a	b	c	
1. Clean answer sheets copied before grading		<u>FBK</u>		
2. Answer key changes and question deletions justified and documented		<u>FBK</u>		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)		<u>FBK</u>		
4. Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail		<u>FBK</u>		
5. All other failing examinations checked to ensure that grades are justified		<u>FBK</u>		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants		<u>FBK</u>		
Printed Name/Signature		Date		
a. Grader	_____			
b. Facility Reviewer(*)	<u>Fred B Kirk Jr / Fred B Kirk</u>		<u>5-28-09</u>	
c. NRC Chief Examiner (*)	_____			
d. NRC Supervisor (*)	_____			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.				