

COVER SHEET

MCGUIRE EXAM 2000-301

50-369, 370/2000-301

MAY 8 - 12, MAY 19,

MAY 22 - 25, 2000















-- ADMINISTRATIVE DOCUMENTS -- ALL IN ONE ADAMS DOCUMENT

- [✓] ES-201-1 - Exam Preparation Checklist
- [✓] ES-201-2 - Exam Outline Quality Checklist
- [✓] ES-201-3 - Exam Security Agreements
- [✓] ES-301-3 - Operating Test Quality Checklist
- [✓] ES-301-4 - Simulator Scenario Quality Checklist
- [✓] ES-301-5 - Transient & Event Checklist
- [✓] ES-301-6 - Competencies Checklist
- [✓] ES-401-7 - Written Exam Quality Checklist
- [✓] ES-401-9 - Written Exam Review Worksheet
- [✓] ES-403-1 - Written Exam Grading Quality Checklist
- [✓] ES-501-1 - Post Exam Check Sheet
- ✓ 401-4 SRO Exam Outline
- ✓ 401-4 RO Exam Outline

Facility: McGUIRE		Date of Exam: 5/19/00		Exam Level: RO/SRO		
Item Description				Initial		
				a	b*	c*
1.	Questions and answers technically accurate and applicable to facility			BCJ	JA	MS
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			BCJ	JA	MS
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401			BCJ	JA	MS
4.	No more than 25 questions are duplicated from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right	NRC 15	Other 85	BCJ	JA	MS
5.	[No less than 5 percent question duplication from the license screening/audit exam (if independently written)]			BCJ	JA	MS
6.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank 8	Modified 23	New 54	BCJ	JA
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory 48	C/A 52	BCJ	JA	MS
8.	References/handouts provided do not give away answers			BCJ	JA	MS
9.	Question distribution meets previously approved examination outline; deviations are justified			BCJ	JA	MS
10.	Question psychometric quality and format meet ES, Appendix B, guidelines			BCJ	JA	MS
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet			BCJ	JA	MS
Printed Name / Signature				Date		
a. Author	BRIAN C. HAAGENSEN			3/20/00		
b. Facility Reviewer(*)	Thomas A. Aufaw			3/21/00		
c. NRC Chief Examiner(*)	MARVIN SYKES			4/20/00		
d. NRC Regional Supervisor(*)	H.O. CHRISTOPSON			5/5/00		
<p>Note: * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required.</p> <p># See special instructions (Section E.2.c) for Items 1, 4, 5, and 6.</p> <p>[] The items in brackets do not apply to NRC-prepared examinations.</p>						

Facility: <u>McGUIRE</u>		Date of Exam: <u>5/19/00</u>		Exam Level: RO <u>SRO</u>																																				
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4.	No more than 25 questions are duplicated from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right	NRC <u>21</u>	Other <u>79</u>	<u>BSJ</u>	<u>JA</u>	<u>MS</u>																																		
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6.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank <u>7</u>	Modified <u>19</u>	New <u>53</u>	<u>BSJ</u>	<u>JA</u>																																		
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory <u>42</u>	C/A <u>58</u>	<u>BSJ</u>	<u>JA</u>	<u>MS</u>																																		
8.	References/handouts provided do not give away answers			<u>BSJ</u>	<u>JA</u>	<u>MS</u>																																		
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Facility: McGuire Nuclear StationDates of Examination: 5/8-12/00 & 5/22-27/00Examinations Developed by: Facility / NRC (circle one)

Target Date*	Task Description / Reference	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	
-120	3. Facility contact briefed on security & other requirements (C.2.c)	
-120	4. Corporate notification letter sent (C.2.d)	
[-90]	[5. Reference material due (C.1.e; C.3.c)]	N/A
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202)	
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	N/A
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	

* Target dates 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 to examinations prepared by the NRC.

Facility: <u>McGUIRE 1&2</u>		Date of Examination: <u>5/8-26/00</u>		
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.	CA	JA	ML
	b. Assess whether the outline was systematically prepared and whether all knowledge and ability categories are appropriately sampled.	CA	JA	ML
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	CA	JA	ML
	d. Assess whether the repetition from previous examination outlines is excessive.	CA	JA	ML
2. S I M	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, and major transients.	CA	JA	ML
	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; ensure 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 over successive days.	CA	JA	ML
	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.	CA	JA	ML
3. W / T	a. Verify that: (1) the outline(s) contain(s) the required number of control room and in-plant tasks, (2) no more than 30% of the test material is repeated from the last NRC examination, (3)* no tasks are duplicated from the applicants' audit test(s), and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks.	CA	JA	ML
	b. Verify that: (1) the tasks are distributed among the safety function groupings as specified in ES-301, (2) one task is conducted in a low-power or shutdown condition, (3) 40% of the tasks require the applicant to implement an alternate path procedure, (4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and (5) the in-plant walk-through requires the applicant to enter the RCA.	CA	JA	ML
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	CA	JA	ML
	d. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on successive days.	CA	JA	ML
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.	CA	JA	ML
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	CA	JA	ML
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	CA	JA	ML
	d. Check for duplication and overlap among exam sections.	CA	JA	ML
	e. Check the entire exam for balance of coverage.	CA	JA	ML
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	CA	JA	ML
a. Author		Printed Name / Signature		Date
b. Facility Reviewer(*)		CHARLES SAWYER / <i>Charles Sawyer</i>		2-28-00
c. Chief Examiner		THOMAS A. ARLOFF / <i>Thomas A. Arloff</i>		2-28-00
d. NRC Supervisor		MARVIN SYKES / <i>Marvin Sykes</i>		3/2/00
		GEORGE T. HOPPER / <i>George T. Hopper</i>		3/23/00

(*) Not applicable for NRC-developed examinations.



Duke Energy Corporation

McGuire Nuclear Station
12700 Hagers Ferry Road
Huntersville, NC 28078-9340

(704) 875-4800 OFFICE

(704) 875-4809 FAX

July 20, 2000

Mr. Charles Payne
U. S. Nuclear Regulatory Commission
Operator Licensing and Human Performance Branch
Atlanta Federal Center
61 Forsyth Street, SW Suite 23T85
Atlanta, GA 30303-3415

Subject: Security Agreement

Enclosed is the signed security agreement from the previous HLP exams.

A handwritten signature in cursive script that reads 'Charles Sawyer'.

Charles Sawyer

CWS:cd

Enclosure

AUG 3 2000

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 5/8 - 5/22/00 of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (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 5/8 to 5/22/00 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. CHARLES SAWYER	INSTRUCTOR / EXAM LEAD	<i>Charles Sawyer</i>	11-4-99	<i>Charles Sawyer</i>	5-25-00	
2. BRIAN HAAGENSEN	CONSULTANT PSHA	<i>Brian Haagensen</i>	11-4-99	<i>Brian Haagensen</i>	5-29-00	
3. Paul Sweetland	CONSULTANT PSHA	<i>Paul Sweetland</i>	11/7/99	<i>Paul Sweetland</i>	6/30/00	
4. Rob Billings	Instructor	<i>Rob Billings</i>	1-5-00	<i>Rob Billings</i>	6-11-00	
5. STEVEN HELMS	INSTRUCTOR	<i>Steven Helms</i>	1-5-00	<i>Steven Helms</i>	5/25/00	
6. DENNIS TAYLOR	SIMULATOR ENGINEER / SUMMIT	<i>Dennis Taylor</i>	1-5-00	<i>Dennis Taylor</i>	5/25/00	
7. Ray A. Wilson	IT III	<i>Ray A. Wilson</i>	1-5-00	<i>Ray A. Wilson</i>	5/25/00	
8. W. R. DAKER	IT PROF. II	<i>W. R. Daker</i>	1-6-00	<i>W. R. Daker</i>	5/25/00	
9. Tom Anlow	Facility Rep	<i>Thomas L. Anlow</i>	1/3/00	<i>T. Anlow</i>	5/31/00	
10. Terry S. Tessnear	Sr Tech Spec / Sim Sppt	<i>Terry S. Tessnear</i>	1/18/00	<i>Terry S. Tessnear</i>	5/30/00	
11. CHUCK FLAM	IT PROF	<i>Chuck Flam</i>	1/18/00	<i>Chuck Flam</i>	5/25/00	
12. Suthash Kumar	IT 3	<i>Suthash Kumar</i>	1/18/00	<i>Suthash Kumar</i>	5/25/00	
13. EDDIE L. ROBERTS	SUPERVISOR, OPS TRNG.	<i>Eddie L. Roberts</i>	3/6/00	<i>Eddie L. Roberts</i>	5/25/00	
14. Philip A. Thompson	SHIFT SUPERVISOR EPLAP Power	<i>Philip A. Thompson</i>	3/6/00	<i>Philip A. Thompson</i>	5-25-00	
15. ROBIN J. BELL	LICENSED REACTOR OPERATOR	<i>Robin J. Bell</i>	3-6-00	<i>Robin J. Bell</i>	6-2-00	
16. Charles E. Newman	Licensed Reactor Operator	<i>Charles E. Newman</i>	3-13-00	<i>Charles E. Newman</i>	5-26-00	
NOTES:						
17. PATRICK R. JACKSON	SRO / STA - SIM	<i>Patrick R. Jackson</i>	3-13-00	<i>Patrick R. Jackson</i>	7-11-00	

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of _____ as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (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 _____. 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. ROBERT M. POPE	SUPERVISOR OAS TANG	Robert M. Pope	5-16-00	Robert M. Pope	5-25-00
2. DAVID W. BUNCH	OPS TEST SUPV.	David W. Bunch	4-27-00	David W. Bunch	6-6-00
3. CONNIE R. DUFFELL	ADMIN SPEC	Connie R. Duffell	5-2-00	Connie R. Duffell	5-25-00
4. SCOTTY L. BRADSHAW	Supt of OPS	Scotty L. Bradshaw	5-8-00	Scotty L. Bradshaw	6-14-00
5. ALAN ORTON	Manager - operations Training	Alan Orton	5-8-00	Alan Orton	5-25-00
6. KEVIN W. POPE	OWPm	Kevin W. Pope	5-10-00	Kevin W. Pope	5-31-00
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

NOTES:

Facility: <u>McGuire 1 & 2</u>		Date of Examination: <u>5/8-26/00</u>		Operating Test Number: <u>1</u>																
1. GENERAL CRITERIA			Initials																	
			a	b	c															
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	CA	78	Ⓟ																
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	CA	78	Ⓟ																
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	CA	78	Ⓟ																
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	CA	78	Ⓟ																
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	CA	78	Ⓟ																
2. WALK-THROUGH (CATEGORY A & B) CRITERIA			--	--	--															
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> initial conditions initiating cues references and tools, including associated procedures validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee specific performance criteria that include: <ul style="list-style-type: none"> detailed expected actions with exact criteria and nomenclature system response and other examiner cues statements describing important observations to be made by the applicant criteria for successful completion of the task identification of critical steps and their associated performance standards restrictions on the sequence of steps, if applicable 	CA	78	MS																
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	N/A	N/A	MS																
c.	Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.	CA	78	MS																
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	CA	78	MS																
3. SIMULATOR (CATEGORY C) CRITERIA			--	--	--															
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	CA	78	Ⓟ																
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	Printed Name / Signature	Date																		
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(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.																				

Facility: <i>McGuire</i>		Date of Exam: <i>5-8-00</i>		Scenario Numbers: <i>1 / 2 / 3</i>		Operating Test No.:	
QUALITATIVE ATTRIBUTES			Initials				
			a	b	c		
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	<i>U</i>	<i>A</i>	<i>P</i>			
2.	The scenarios consist mostly of related events.	<i>U</i>	<i>A</i>	<i>P</i>			
3.	Each event description consists of <ul style="list-style-type: none"> the point in the scenario when it is to be initiated the malfunction(s) that are entered to initiate the event the symptoms/cues that will be visible to the crew the expected operator actions (by shift position) the event termination point (if applicable) 	<i>U</i>	<i>A</i>	<i>P</i>			
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.	<i>U</i>	<i>A</i>	<i>P</i>			
5.	The events are valid with regard to physics and thermodynamics.	<i>U</i>	<i>A</i>	<i>P</i>			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	<i>U</i>	<i>A</i>	<i>P</i>			
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.	<i>N/A</i>	<i>N/A</i>	<i>N/A</i>			
8.	The simulator modeling is not altered.	<i>U</i>	<i>A</i>	<i>P</i>			
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	<i>U</i>	<i>A</i>	<i>P</i>			
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.4 of ES-301.	<i>U</i>	<i>A</i>	<i>P</i>			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	<i>U</i>	<i>A</i>	<i>P</i>			
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).	<i>U</i>	<i>A</i>	<i>P</i>			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<i>U</i>	<i>A</i>	<i>P</i>			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes	-	-	-		
1.	Total malfunctions (5-8)	<i>71516</i>	<i>U</i>	<i>A</i>	<i>P</i>		
2.	Malfunctions after EOP entry (1-2)	<i>21311</i>	<i>U</i>	<i>A</i>	<i>P</i>		
3.	Abnormal events (2-4)	<i>31313</i>	<i>U</i>	<i>A</i>	<i>P</i>		
4.	Major transients (1-2)	<i>21111</i>	<i>U</i>	<i>A</i>	<i>P</i>		
5.	EOPs entered/requiring substantive actions (1-2)	<i>21211</i>	<i>U</i>	<i>A</i>	<i>P</i>		
6.	EOP contingencies requiring substantive actions (0-2)	<i>01011</i>	<i>U</i>	<i>A</i>	<i>P</i>		
7.	Critical tasks (2-3)	<i>21212</i>	<i>U</i>	<i>A</i>	<i>P</i>		

SCENARIO SET NO.: |

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1 RO	2 BOP	3	4
RO1	Reactivity	1	1	5		
	Normal	1	1	5		
	Instrument	2	3	3		
	Component	2	5	1		
	Major	1	6	6		

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

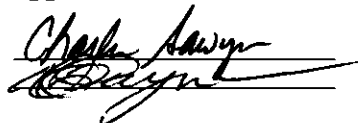
SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:

Chief Examiner:



NUREG-1021, Revision 8

SCENARIO SET NO.: 1

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1 BOP	2 RO	3	4
RO2	Reactivity	1	1	5		
	Normal	1	1	5		
	Instrument	2	2	4		
	Component	2	4	2		
	Major	1	6	6		

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

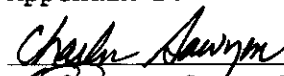
SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

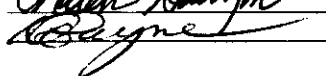
Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:

Chief Examiner:





NUREG-1021, Revision 8

SCENARIO SET NO.: |

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2 RO	3 BOP	4
RO3	Reactivity	1		5	1	
	Normal	1		5	1	
	Instrument	2		4	3	
	Component	2		2	5	
	Major	1		6	6	

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:

Chief Examiner:

Charles A. Brown
Bayne

NUREG-1021, Revision 8

SCENARIO SET NO.: 1

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2 BOP	3 RO	4
RO4	Reactivity	1		5	1	
	Normal	1		5	1	
	Instrument	2		3	2	
	Component	2		1	4	
	Major	1		6	6	

As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:
Chief Examiner:

Challen Lawrence
Rayne

NUREG-1021, Revision 8

SCENARIO SET NO.: 1

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2 RO	3 BOP	4
RO5	Reactivity	1		5	1	
	Normal	1		5	1	
	Instrument	2		4	3	
	Component	2		2	5	
	Major	1		6	6	

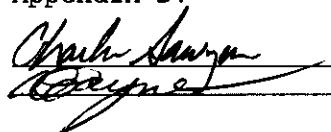
As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

Instructions:

(1) Enter the operating test number and ES-D-1 event numbers for each evolution type.

(2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:
Chief Examiner:


NUREG-1021, Revision 8

SCENARIO SET NO.: {

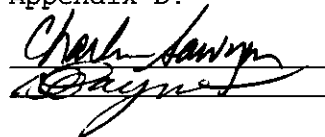
Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				
As RO SRO-I As SRO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1			.	
	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				
SRO-U1	Reactivity	0				
	Normal	1	1	5		
	Instrument	1	2, 3	3, 4		
	Component	1	4, 5	1, 2		
	Major	1	6	6		

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:

Chief Examiner:



NUREG-1021, Revision 8

SCENARIO SET NO.: {

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				
As RO SRO-I As SRO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				
SRO-U2	Reactivity	0				
	Normal	1		5	1	
	Instrument	1		3, 4	2, 3	
	Component	1		1, 2	4, 5	
	Major	1		6	6	

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:

Chief Examiner:

Charles Sawyer
Boyd

NUREG-1021, Revision 8

SCENARIO SET NO.:]

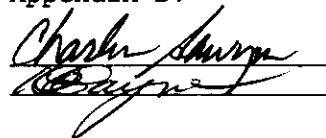
Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				
As RO SRO-I As SRO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				
SRO-U3	Reactivity	0				
	Normal	1		5		
	Instrument	1		3, 4		
	Component	1		1, 2		
	Major	1		6		

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:

Chief Examiner:



NUREG-1021, Revision 8

SCENARIO SET NO.:]

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				
As RO SRO-I As SRO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				
SRO-U5	Reactivity	0			0	
	Normal	1			1	
	Instrument	1			2	
	Component	1			5	
	Major	1			6	

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:
Chief Examiner:

Charles Sawyer
Bayne

NUREG-1021, Revision 8

SCENARIO SET NO.: 1

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

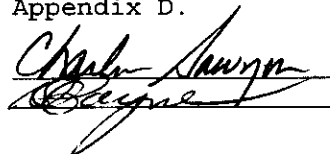
As RO	Reactivity	1				
	Normal	0				
	Instrument	1				
	Component	1				
	Major	1				
SRO-I						
As SRO	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

SRO-U4	Reactivity	0				
	Normal	1			1	
	Instrument	1			2, 3	
	Component	1			4, 5	
	Major	1			6	

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:
Chief Examiner:



NUREG-1021, Revision 8

SCENARIO SET NO.: 1

Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				

As RO	Reactivity	1		5		
	Normal	0		0		
	Instrument	1		4		
	Component	1		2		
	Major	1		6		
SRO-I1						
As SRO	Reactivity	0	0			
	Normal	1	1			
	Instrument	1	2,3			
	Component	1	4,6			
	Major	1	6			

SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

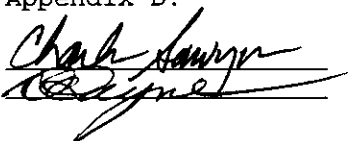
Instructions:

(1) Enter the operating test number and ES-D-1 event numbers for each evolution type.

(2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:

Chief Examiner:



NUREG-1021, Revision 8

SCENARIO SET NO.: |

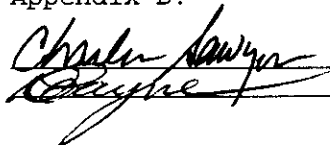
Applicant Type	Evolution Type	Number Reqr'd	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument	2				
	Component	2				
	Major	1				
As RO SRO-I2 As SRO	Reactivity	1	1			
	Normal	0	0			
	Instrument	1	3			
	Component	1	5			
	Major	1	6			
	Reactivity	0		0		
	Normal	1		5		
	Instrument	1		3,4		
	Component	1		1,2		
	Major	1		6		
SRO-U	Reactivity	0				
	Normal	1				
	Instrument	1				
	Component	1				
	Major	1				

Instructions:

- (1) Enter the operating test number and ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions but must be significant per Appendix D.

Author:

Chief Examiner:



NUREG-1021, Revision 8

Competencies Crew 1	Applicant #1 RO/SRO-I/SRO-U1				Applicant #2 RO1/SRO-I/SRO-U				Applicant #3 RO2/SRO-I/SRO-U			
	SCENARIO				SCENARIO				SCENARIO			
	1 SRO	2 SRO	3	4	1 RO	2 BOP	3	4	1 BOP	2 RO	3	4
Understand and Interpret Annunciators and Alarms	1,2 3,4 5,6	1,2 3,4 5,6			3,5 6	1,3			1,2, 4,6	2,4 5,6		
Diagnose Events and Conditions	1,2 3,4 5,6	1,2 3,4 5,6			3,5 6	1,3, 5,6			1,2, 4,6	2,4 5,6		
Understand Plant and System Response	1,2 3,4 5,6	1,2 3,4 5,6			3,5 6	1,3, 5,6			1,2, 4,6	2,4 5,6		
Comply With and Use Procedures (1)	1,2 3,4 5,6	1,2 3,4 5,6			3,5 6	1,3, 5,6			1,2, 4,6	2,4 5,6		
Operate Control Boards (2)					3,5 6	1,3, 5,6			1,2, 4,6	2,4 5,6		
Communicate and Interact With the Crew	1,2 3,4 5,6	1,2 3,4 5,6			1,2 3,4 5,6	1,2, 3,4, 5,6			1,2, 3,4, 5,6	1,2 3,4 5,6		
Supervisory Ability (3)	1,2 3,4 5,6	1,2 3,4 5,6										
Comply With and Use Tech. Specs. (3)	2,3 4	3,5										
Notes: (1) Includes Technical Specification compliance for RO. (2) Optional for an SRO U. (3) Only applicable to SROs.												

INSTRUCTIONS:

Circle the applicant's license type and enter the numbers that test the competency for each scenario set.

Author:

Chief Examiner:

Charles Sawyer
R. D. Payne

Competencies Crew 2	Applicant #1 RO/SRO-I/SRO-U2				Applicant #2 RO3/SRO-I/SRO-U				Applicant #3 RO4/SRO-I/SRO-U			
	SCENARIO				SCENARIO				SCENARIO			
	1	2 SRO	3 SRO	4	1	2 RO	3 BOP	4	1	2 BOP	3 RO	4
Understand and Interpret Annunciators and Alarms		1,2 3,4 5,6	2,3 4,5 6			2,4 6	1,3,6			3,5 6	2,4, 5,6	
Diagnose Events and Conditions		1,2 3,4 5,6	2,3 4,5 6			2,4 6	1,3,6			3,5 6	2,4, 5,6	
Understand Plant and System Response		1,2 3,4 5,6	1,2 3,4 5,6			2,4 6	1,3,5 6			3,5,6	2,4, 5,6	
Comply With and Use Procedures (1)		1,2 3,4 5,6	1,2 3,4 5,6			2,4, 5,6	1,3,5 6			3,5,6	2,4, 5,6	
Operate Control Boards (2)						2,4, 5,6	1,3,5 6			3,5,6	2,4, 5,6	
Communicate and Interact With the Crew		1,2 3,4 5,6	1,2 3,4 5,6			1,2, 3,4, 5,6	1,2,3 4,5,6			1,2,3 4,5, 6	1,2, 3,4, 5,6	
Supervisory Ability (3)		1,2 3,4 5,6	1,2 3,4 5,6									
Comply With and Use Tech. Specs. (3)		2,3 5,6	3,5									

Notes:

(1) Includes Technical Specification compliance for RO.

(2) Optional for an SRO U.

(3) Only applicable to SROs.

INSTRUCTIONS:

Circle the applicant's license type and enter the numbers that test the competency for each scenario set.

Author:

Chief Examiner:

Charles Davis

[Signature]

Competencies Crew 3	Applicant #1 RO5/SRO-I/SRO-U				Applicant #2 RO/SRO-I/SRO-U3				Applicant #3 RO/SRO-I/SRO-U4			
	SCENARIO				SCENARIO				SCENARIO			
	1	2 RO	3 BOP	4	1	2 SRO	3 RO	4	1	2 BOP	3 SRO	4
Understand and Interpret Annunciators and Alarms		2,4 6	1,3,6			1,2,3 4,5,6	1,4, 6			3,5 6	2,3,4 ,5,6	
Diagnose Events and Conditions		2,4 6	1,3,6			1,2,3 4,5,6	1,4, 6			3,5 6	2,3,4 ,5,6	
Understand Plant and System Response		2,4 6	1,3,5 6			1,2,3 4,5,6	1,4, 6			3,5,6	1,2,3 4,5,6	
Comply With and Use Procedures (1)		2,4, 5,6	1,3,5 6			1,2,3 4,5,6	1,4, 6			3,5,6	1,2,3 4,5,6	
Operate Control Boards (2)		2,4, 5,6	1,3,5 6				1,4, 6			3,5,6		
Communicate and Interact With the Crew		1,2, 3,4, 5,6	1,2,3 4,5,6			1,2,3 4,5,6	1,2, 3,4, 5,6			1,2,3 4,5,6	1,2,3 4,5,6	
Supervisory Ability (3)						1,2,3 4,5,6					1,2,3 4,5,6	
Comply With and Use Tech. Specs. (3)						2,3,5					3,5	
Notes: (1) Includes Technical Specification compliance for RO. (2) Optional for an SRO U. (3) Only applicable to SROs.												

INSTRUCTIONS:

Circle the applicant's license type and enter the numbers that test the competency for each scenario set.

Author:

Chief Examiner:

NUREG 1021, Revision 8

Competencies Crew 4	Applicant #1 RO/SRO-I1/SRO-U				Applicant #2 RO/SRO-I2/SRO-I				Applicant #3 RO/SRO-I/SRO-U5			
	SCENARIO				SCENARIO				SCENARIO			
	1 SRO	2 RO	3 BOP	4	1 RO	2 SRO	3 BOP	4	1 BOP	2 BOP	3 SRO	4
Understand and Interpret Annunciators and Alarms	1,2 3,4 5,6	2,4 5,6	3,5 6		3,5 6	1,2, 3,4, 6	3,5 6		2,4, 6	1,3 5,6	2,5 6	
Diagnose Events and Conditions	1,3 4,5 6	2,4 5,6	3,5 6		3,5 6	1,2, 3,4, 6	3,5 6		2,4, 6	1,3 5,6	2,5 6	
Understand Plant and System Response	1,2 3,4 5,6	2,4 5,6	3,5 6		3,5 6	1,2, 3,4, 5,6	3,5 6		2,4, 6	1,3 5,6	1,2 5,6	
Comply With and Use Procedures (1)	1,2 3,4 5,6	2,4 5,6	1,3 6,6		3,5 6	1,2, 3,4, 5,6	3,5 6		2,4, 6	1,3 5,6	1,2 5,6	
Operate Control Boards (2)		2,4 5,6	1,3 5,6		3,5 6		3,5 6		2,4, 6	1,3 5,6		
Communicate and Interact With the Crew	1,2 3,4 5,6	1,2 3,4 5,6	1,2 3,4 5,6		1,2 3,4 5,6	1,2, 3,4, 5,6	1,2 3,4 5,6		1,2, 3,4, 5,6	1,2 3,4 5,6	1,2 5,6	
Supervisory Ability (3)	1,2 3,4 5,6					1,2, 3,4, 5,6					1,2 5,6	
Comply With and Use Tech. Specs. (3)	1,3 4					3,5					5	
Notes: (1) Includes Technical Specification compliance for RO. (2) Optional for an SRO U. (3) Only applicable to SROs.												

INSTRUCTIONS:

Circle the applicant's license type and enter the numbers that test the competency for each scenario set.

Author:

Chief Examiner:

Charles Sawyer
Bayne

SRO Exam Vital Statistics

ES 100 1

Facility: McGuire		Date of Exam: 5/19/00						Exam Level: SRO						
		K/A Category Points											Point	
Tier	Group	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Total	Target
1 Emergency & Abnormal Plant Evolutions	1	3	5	5				5	2			4	24	24
	2	1	2	3				3	4			3	16	16
	3	1	0	0				0	1			1	3	3
	Tier Totals	5	7	8				8	7			8	43	43
2 Plant Systems	1	2	1	0	2	1	2	3	2	2	2	2	19	19
	2	2	2	2	3	1	1	2	2	0	1	1	17	17
	3	0	0	1	0	1	0	0	2	0	0	0	4	4
	Tier Totals	4	3	3	5	3	3	5	6	2	3	3	40	40
3 Generic Knowledge and Abilities	Cat 1				Cat 2		Cat 3		Cat 4					
	4				5		4		4		17			
Totals														

[illegible]

E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	Imp.
000087 Reactor Trip - Stabilization - Recovery / I				1.08			Ability to operate and/or monitor ...APW system	4.4/4.3
000088 Pressurizer Vapor Space Accident / III	1.01						Knowledge of the operational implications of the following concepts ...thermodynamics and flow characteristics of open or leaking valves	3.2/3.7
000089 Small Break LOCA / III				1.13			Ability to operate and/or monitor ...ESFAS	4.4/4.4
W/E03 LOCA Cutdown - Depress. / IV								
000022 Loss of Reactor Coolant Makeup / II					2.04		Ability to determine and interpret...how long PZR level can be maintained within limits	2.9/3.8
000027 Pressurizer Pressure Control System Malfunction / III					2.10		Ability to determine and interpret...PZR heater energized/de-energized condition	3.3/3.6
000033 Loss of Intermediate Range HI / VII				1.02			Ability to operate and/or monitor ...level trip bypass	3.0/3.1*
000037 Steam Generator Tube Leak / III						1.7	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation	3.7/4.4
000038 Steam Generator Tube Rupture / III			3.03				Knowledge of the reasons for the following responses ... Automatic actions associated with high radioactivity in S/G sample lines	3.5*/4.0*
W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / IV					2.2		Ability to determine and interpret the following...adherence to appropriate procedures and operation within limitations in the facilities license and amendments	3.7/4.3
000058 Loss of DC Power / VI					2.2		Knowledge of limiting conditions for operation and safety limits	3.4/4.1
000060 Accidental Gaseous Radwaste Rel. / IX					2.02		Ability to determine and interpret...the possible location of a radioactive gas leak with the assistance of PEO, health physics and chemistry personnel	3.1/4.0
000061 ARM System Alarms / VII								
W/E16 High Contaminant Radiation / IX		2.20					Knowledge of the interrelationships between...facility's heat removal systems, including primary coolant, emergency coolant, decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility	2.5/3.0
000065 Loss of Instrument Air / VIII								
K/A Category Totals:	1	2	3	3	4	3	Group Point Total:	16

Bank	Lesson Plan	Objective	Source	NRC	Bank	Mod	New	Remarks	Memory	Comp	Analysis
504	EP-E0	SEQ 10	MOD				1	SRO Only - analysis - MOD Catawba 1999	0	0	1
311	THF-EB	LPRO 8	MOD				1	comprehension - McGuire Retake 1999	0	1	0
430	ECC-NS	SEQ 6	MOD				1	comprehension - MOD McGuire 1999	0	1	0
603	PS-ILE	none	new				1	analysis	0	0	1
298	PS-IPE	SEQ12	MOD				1	analysis	0	0	1
604	IC-ENB	SEQ 10	new				1	comprehension	0	1	0
605	WE-EMF	SEQ 2	MOD				1	comprehension - modified from Catawba 1997 Ques 320	0	1	0
606	WE-EMF	SEQ 3	new				1	memory	1	0	0
471	EP-FO	SEQ 3	MOD				1	memory Mod McGuire 1999	1	0	0
606	EL-EPJ	SEQ 6	BANK			1		memory	1	0	0
611	CH-PC	SEQ 2, 5, 6, 9	new				1	comprehension	0	1	0
612	TA-AM	SEQ 16, 17	new				1	memory	1	0	0
Group Point Total:									5	8	3

[illegible]

System # / Name	K	1	K	2	K	3	K	4	K	5	K	6	A	1	A	2	A	3	A	4	G	Imp.
001 Control Rod Drive																						3.874.0
																						2.09
002 Reactor Coolant Pump																						2.52.7
																						1.10
004 Chemical Volume Control																						3.80.8
																						1.09
013 Engineered Safety Features Actuation																						3.673.8
																						2.01
014 Rod Position Indication																						3.50.8
																						4.5
015 Nuclear Instrumentation																						2.80.0
																						6.03
017 In-core Temperature Monitor																						3.74.0
																						5.02
022 Containment Cooling																						4.14.3
																						3.01
025 Hot Condenser																						3.470.87
																						6.01
026 Containment Spray																						3.90.5
																						4.05
028 Condensate																						2.672.6
																						1.03
029 Main Feedwater																						3.070.37
																						2.11
041 Auxiliary/Emergency Feedwater																						3.173.37
																						4.07
043 DC Electrical																						2.70.2
																						1.02
044 Liquid Feed Wastes																						3.82.6
																						3.02
072 Area Radiation Monitoring																						3.42.6
																						1.01
073 Area Radiation Monitoring																						2.672.5
																						4.02
013 Engineered Safety Features Actuation																						3.72.9
																						4.12
026 Category 1 Tests																						19
																						19

Question	Lesson Plan	Objective	Source	NRC Bank	Mod	New	Remarks	Memory	Comp	Analysis
622	IC-RTB	SEQ 11	new			1	comprehension	0	1	0
623	PS-NCP	SEQ 12	new			1	memory	1	0	0
625	CHFC	SEQ 7	new			1	comprehension	0	1	0
627	ECC-ISE	none	new			1	memory	1	0	0
637	IC-EDA	SEQ 8.9	new			1	comprehension	0	1	0
152.00	IC-ENB	SEQ 12	NRC	1.00			analysis	0	0	1
404.00	IC-CM	SEQ 9	MOD		1		memory - McGraw 1999	1	0	0
628.00	CNT-RV	none	new		1		comprehension	0	1	0
630	CNT-NF	SEQ 20	BANK		1		comprehension	0	1	0
640	ECC-NS	SEQ 6	new		1		comprehension	0	1	0
631	CF-CM	SEQ 11	NRC	1			memory - Columbia 1999	1	0	0
636	CF-ISE	SEQ 11	MOD		1		comprehension - MOD NRC (Columbia 1999)	0	1	0
634	CF-CA	none	new		1		memory	1	0	0
646	EL-ENL	SEQ 4.8	BANK		1		memory - BANK EL-ENL 0.3	1	0	0
407.00	WE-RDR	SEQ 4.5	MOD		1		comprehension	0	1	0

System # / Name	K	1	K	2	K	3	K	4	K	5	K	6	A	1	A	2	A	3	A	4	G	Imp.	Q	Lesson Plan	Objective	Source	NRC	Bank	Mod	New	Remarks	Memory	Comp	Analysis		
602 Reactor Coolant													1.08									3.7/3.8		PS-NC	SEQ 21.23	new			1	comprehension	0	1	0			
606 Emergency Core Cooling												4.12										4.17/4.37		PS-NV	SEQ 5	new			1	memory	1	0	0			
610 Pressurizer Pressure Control																						3.0/3.4		PS-PE	SEQ 3	new			1	memory	1	0	0			
611 Pressurizer Level Control													2.06									3.7/3.9		PS-PE	SEQ 5	new			1	comprehension	0	1	0			
612 Reactor Protection												6.03										3.1/3.5		IC-PE	SEQ 3	new			1	comprehension	0	1	0			
616 Non-nuclear Instrumentation																						3.57/3.57		CF-PE	SEQ 11	BANK	1			comprehension	0	1	0			
627 Containment Iodine Removal													2.01									3.17/3.47		CHT-VX	none	new			1	comprehension	0	1	0			
628 Hydrogen Recombiner and Purge Control																																				
628 Containment Purge																																				
633 Spent Fuel Pool Cooling													1.01									2.7/3.3		FM-4F	SEQ 11.12	new			1	memory	1	0	0			
635 Steam Generator																						4.54/4.6		EP-E3	SEQ 4	new			1	memory	1	0	0			
639 Main and Relief Steam																						3.6/3.7		MT-MSR	SEQ 10	new			1	memory	1	0	0			
655 Condensate Air Removal																																				
662 AC Electrical Distribution													3.01									3.5/3.9		PS-MCP	SEQ 8	MOD			1	comprehension	0	1	0			
664 Emergency Diesel Generator																						2.8/3.2		DG-DG	SEQ 4	new			1	memory	1	0	0			
675 Circulating Water																																				
678 Station Air													4.21									2.9/3.2		SS-V1	SEQ 7	NRC	1			comprehension - McGuire 1998	0	1	0			
686 Fire Protection																						2.8/3.57		SS-RPY	SEQ 11	MOD			1	memory - MCO McGuire 1996	1	0	0			
685 Containment																						2.8/3.27		IC-JAE	SEQ 2	new				memory	1	0	0			
686 Category Totals:																						Group Point Total:	17							1	1	2	13		9	7

System 8 / Items																N/A Topic(s)																Imp.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K	K

Facility: McGuire			Date of Exam: 5/19/00			Exam Level:		
Category	K/A #	Topic	Imp.	Imp.	Imp.	Imp.	Imp.	Imp.
Conduct of Operations	2.1.21	Ability to obtain and verify controlled procedure copy	3/12.2					
	Total							
Equipment Control	2.2.2	Ability to manipulate the console controls as required to operate the facility between shutdown and designated power levels	4/02.5					
	Total							
Radiation Control	2.3.1	Knowledge of 10 CFR 20 and related facility radiation control requirements	2/62.0					
	2.3.4	Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized	2/52.1					
Emergency Procedures and Plan	2.4.38	Knowledge of the RO's responsibilities in emergency plan implementation	3.32.1					
	2.4.47	Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material	3/42.7					
Total			4					
Tier 3 Point Total			17					

Question	Plan	Objective	Source	NRC	Bank	Mod	New	Remarks	Memory	Comp	Analysis
655	ADM-OP	SEQ 8	MOD			1		memory - McGuire 1997	1	0	0
465	GEN-ENC	none	MOD			1		comprehension - McGuire 1999	0	1	0
125	RAD-RP	SEQ 11	NRC	1				comprehension - McGuire 1997	0	1	0
353	RAD-RP	SEQ 59, 60	MOD			1		analysis - Calamba 1999	0	0	1
661	RAD-RP	EO 19, 22, 2	new				1	analysis	0	0	1
338	EP-INTRO	SEQ 12	NRC	1				memory - Calamba 1999	1	0	0
111	EP-EMP	SEQ 12	BANK			1		RO Only - comprehension - McGuire 1998	0	1	0
120	TH-FF	SEQ 6	MOD			1		analysis - MOD McGuire 1997	0	0	1
Total				4	1	7	5		7	7	3

McGuire Sample Plan

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Facility: McGuire				Date of Exam: 5/19/00				Exam Level: RO					
		K/A Category Points											Point
Tier	Group	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Total
1 Emergency & Abnormal Plant Evolutions	1	2	2	4				3	2			3	16
	2	2	3	2				4	4			2	17
	3	1	0	0				0	1			1	3
	Tier Totals	5	5	6				7	7			6	36
2 Plant Systems	1	1	1	2	3	2	2	3	3	3	2	1	23
	2	2	1	3	3	1	1	2	3	1	2	1	20
	3	1	1	1	0	1	0	0	2	0	1	1	8
	Tier Totals	4	3	6	6	4	3	5	8	4	5	3	51
3	Generic Knowledge and Abilities	Cat 1		Cat 2		Cat 3		Cat 4					13
		3		4		3		3					
<p>Note:</p> <ul style="list-style-type: none">* Attempt to distribute topics among all K/A categories; select at least one topic from every K/A category within each tier.* Actual point totals must match those specified in the table.* Select topics from many systems; avoid selecting more than two or three K/A topics from a system unless they relate to plant-specific priorities.* Systems /evolutions within each group are identified on the associated outline.* The shaded areas are not applicable to the category/tier.** Denotes plant specific, high priority K/As													

Limits	Total	NRC	+ BANK	High Cog
RO	20	13	7	53.0%
SRO	24	18	6	59.0%

Number Source of Question

Target

16	16	1	0	4	11	5	8	3
17	17	2	1	5	9	8	7	2
3	3	1	0	0	2	1	1	1
36	36	4	1	9	22	14	16	6
23	23	5	2	5	11	12	7	4
20	20	1	3	3	13	12	8	0
8	8	0	0	1	7	3	5	0
51	51	6	5	9	31	27	20	4
13	13	3	1	7	2	6	4	3
Totals:	100	13	7	25	55	47	40	13

Higher Level Cognitive Questions 53.0%

E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	Imp.
000005 Inoperable/Stuck Control Rod / I						4.48	Ability to interpret control room indications to verify the status and operation of system and how operator actions and directives affect plant system conditions	3.5/3.8
000015/17 RCP Malfunction / IV					2.09		Ability to determine and interpret...when to secure RCPs on high stator temperatures	3.4/3.5
WIE08 Natural Circ. / IV	1.1						Knowledge of the operational implications of the following concepts as they apply to the...components, capacity and function of emergency systems	3.0/3.4
000024 Emergency Boration / I	1.02						Knowledge of the operational implications of the following concepts...relationship between boron addition and reactor power	3.6/3.9
000026 Loss of Component Cooling Water / VII						4.24	Knowledge of loss of cooling water procedures	3.3/3.7
000027 Pressurizer Pressure Control System Malfunction / III					2.10		Ability to determine and interpret...PZR heater energized/de-energized condition	3.3/3.6
000046 Steam Line Rupture - Excessive Heat Transfer / IV				1.05			Ability to operate and/or monitor...manual and automatic RPS trip initiation	4.5/4.5
000051 Loss of Condenser Vacuum / IV			3.01				Knowledge of the reasons for the following responses...loss of steam dump capability upon loss of condenser vacuum	2.8/3.1*
000057 Loss of Vital Ac Elec. Inst. Bus. / VI					1.06		Ability to operate and/or monitor...manual control of components for which automatic control is lost	3.5/3.5
000062 Loss of Nuclear Service Water / IV								
000067 Plant Fire On-site / IX			3.04				Knowledge of the reasons for the following responses...actions contained in EOP for plant fire on-site	3.3/4.1
000068 Control Room Evac. / VII			3.07				Knowledge of the reasons for the following responses...maintenance of SG levels using APW control valves	4.0/4.3
000069 (WIE14) Loss of CTMT Integrity / V			2.03				Knowledge of the interrelationships between...personnel access hatch and emergency access hatch	2.8/2.9
000074 (WIE06&E07) Inad. Core Cooling / IV					1.02		Ability to operate and/or monitor...RCS cooldown rate	3.9/4.2
000076 High Reactor Coolant Activity / IX						4.11	Knowledge of abnormal condition procedures	3.4/3.6
K/A Category Totals:	2	2	4	3	2	3	Group Point Total:	16

Question	Lesson Plan	Objective	Source	NRC	Bank	Modifi- ed	New	Remarks	Memory	Compre- hension	Analysis
711	EDA	SEQ 5.10	new				1	comprehension		1	
242	NCP	SEQ15	MOD			1		comprehension - Catawba 1997		1	
666	EP-E0	SEQ 6	new				1	memory	1		
591	NV	SEQ 5	new				1	comprehension		1	
592	ND	SEQ 9	new				1	comprehension		1	
298	PS-IPE	SEQ12	MOD			1		analysis			1
593	PS-IPE	none	new				1	comprehension		1	
594	STM-IDE	SEQ 5	new				1	comprehension		1	
82	EL-EPL	SEQ 14, 15	NRC	1				memory	1		
596	none	none	new				1	memory	1		
501	CF-CA	SEQ 4	MOD			1		analysis - Catawba 1999			1
597	CNT-CNT	SEQ 8	new				1	comprehension		1	
598	EP-INTRO	SEQ 10	new				1	analysis			1
307	CH-PC	SEQ 12	MOD			1		comprehension		1	
16				1	0	4	11		16	5	8

EIA/E 2 / Name / Safety Function	K	K	K	A	A	A	Q	K/A Topic(s)	Imp.
	1	2	3	1	2				
000001 Continuous Rod Withdrawal / I						1.05		Ability to operate and/or monitor - reactor trip switches	4.34/2
000007 Reactor Trip - Substitution - Recovery / I						1.08		Ability to operate and/or monitor - ATR system	4.44/3
000008 Pressurizer Vapor Space Accident / II	1.01							Knowledge of the operational implications of the following concepts... thermodynamics and flow characteristics of open or sealed systems	3.23/7
000009 Small Break LOCA / II						1.13		Ability to operate and/or monitor - EBPAS	4.44/4
000011 Large Break LOCA / II	1.01							Knowledge of the operational implications of the following concepts... natural circulation and cooling industry public policy	4.14/4
000014 LOCA Outside Containment / II									
000015 LOCA Containment - Degradation / IV									
000016 Loss of Emergency Coolant Reactor / IV									
000018 Loss of Reactor Coolant Makeup / II						2.2		Ability to determine and interpret the following... adherence to appropriate procedures and operation within limitations in the facilities	3.54/0
000022 Loss of Reactor Coolant Makeup / II						2.04		Ability to determine and interpret - how long PZR level can be maintained within limits	2.80/8
000023 Loss of BWR System / IV									
000025 Anticipated Transient with Scram / I	2.08							Knowledge of the interrelationships between... Division, delays and decisions	2.87/3.1*
000025 Loss of Steam Range 20 / IV									
000033 Loss of Intermediate Range 20 / IV						1.02		Ability to operate and/or monitor - level trip bypass	3.07/3.1*
000037 Steam Generator Tube Leak / II						1.7		Ability to evaluate plant performance and make operational judgments... identifying characteristics, reactor behavior and instrument interpretation	3.14/4
000038 Steam Generator Tube Rupture / II	3.03							Knowledge of the reasons for the following responses - Automatic actions associated with high radioactivity in S/G sample lines	3.87/4.07
000034 Loss of BWR Feedwater / IV									
000035 Bypasses Heat Transfer - Loss of Secondary Heat Sink / IV						2.2		Ability to determine and interpret the following... adherence to appropriate procedures and operation within limitations in the facilities	3.74/3
000036 Loss of DC Power / VI						2.22		Knowledge of limiting conditions for operation and safety limits	3.44/1
000038 Accidental Liquid Feedwater Flow / IX	2.01							Knowledge of the interrelationships between... radioactive liquid monitoring	2.77/2.8
000039 Accidental Gaseous Feedwater Flow / IX						2.02		Ability to determine and interpret - the possible location of a radioactive gas leak with the assistance of PECO, health physics and chemistry personnel	3.14/0
000041 ASME System Alarm / VI								Knowledge of the interrelationships between... facility's total removal systems, including primary coolant, emergency coolant, decay heat removal systems and the facility's total removal systems to the operation of the facility	3.62/0
EIA Category Totals:	2	3	2	4	4	2			Group Point Total: 17

Bank	Question	Lesson Plan	Objective	Source	MCQ	Bank	Modified	New	Remarks	Memory	Comp	Analysis
308	AF-14	SEQ 4	NRG	1					memory - Clamdis 1987	1		
504	EP-ED	SEQ 10	MOD						SRQ Only - analysis - MOD Clamdis 1988			
311	IF-E3	LRP 8	MOD						comprehension - McQuire Refills 1989		1	
430	ECC-NS	SEQ 6	MOD						comprehension - MOD McQuire 1989			
601	TA-AM	SEQ 3	new						memory	1		
602	EP-E1	SEQ 8	new						comprehension		1	
603	PS-LE	none	new						analysis			1
241	IC-RTB	SEQ 1	NRG	1					memory - Clamdis 1987	1		
604	IC-GBS	SEQ 10	new						comprehension		1	
605	WE-EWF	SEQ 2	MOD						comprehension - modified from Clamdis 1987 Ques 20			1
606	WE-EWF	SEQ 3	new						memory	1		
471	EP-F0	SEQ 3	MOD						memory Mod McQuire 1989	1		
608	EL-EPJ	SEQ 6	BANK						memory	1		
609	WE-RJR	SEQ 4	new						memory	1		
611	CHPC	SEQ 2, 5, 6	new						comprehension			1
612	TA-AM	SEQ 16, 17	new						memory	1		
Group Point Total: 17												

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System & Name	K	1	K	2	K	3	K	4	K	5	K	6	A	1	A	2	A	3	A	4	G	Imp.	
002 Reactor Control																						3.713.6	
006 Emergency Core Cooling																						4.174.3*	
010 Pressurizer Pressure Control																						3.93.4	
011 Pressurizer Level Control																						3.713.9	
012 Reactor Protection																						3.713.5	
014 Rod Position Indication																						3.923.8	
016 Non-nuclear Instrumentation																						3.713.5*	
020 Containment Spray																						3.912.5	
022 Speed Fuel Feed Control																						2.713.3	
023 Steam Generator																						4.344.6	
028 Water and Fuel Steam																						3.613.7	
032 AC Electrical Distribution																						3.923.9	
033 DC Electrical																						2.713.2	
044 Emergency Diesel Generator																						2.913.2	
072 Circulating Water																						2.92.7	
079 Station Air																						2.913.2	
088 Fire Protection																						2.913.5*	
Grand Total:																						20	20

Question	Lesson Plan	Objective	Source	MC	Blank	Mod	New	Remarks	Memory	Comp	Analysis			
629	PS-MC	SEC 21, 23	new				1	comprehension		1				
631	PS-MV	SEC 5	new				1	memory		1				
632	PS-PE	SEC 3	new				1	memory		1				
633	PS-PE	SEC 5	new				1	comprehension		1				
636	IC-PE	SEC 3	new				1	comprehension		1				
637	IC-EDA	SEC 8, 9	new				1	comprehension		1				
639	CF-PE	SEC 11	BANK		1			comprehension		1				
640	ECC-MC	SEC 8	new				1	comprehension		1				
642	FM-MF	SEC 11, 12	new				1	memory		1				
643	EP-E3	SEC 4	new				1	memory		1				
644	MT-MSR	SEC 10	new				1	memory		1				
243	PS-MCP	SEC 6	MOD				1	comprehension		1				
646	EL-EPL	SEC 4, 6	BANK		1			memory - BANK EL-EPL 013		1				
651	DC-DC	SEC 4	new				1	memory		1				
654	MT-MC	SEC 6	BANK		1			memory - BANK MT-MC 011		1				
451	SS-M	SEC 7	MFC	1				comprehension - McGraw 1989		1				
60	SS-RCT	SEC 11	MOD			1		memory - MOD McGraw 1986		1				
Grand Total:												12	8	0

Question	Lesson Plan	Objectives	Source	NRC	Bank	Modified	New Remarks	Memory	Comp	Analysis
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008 Component Cooling Water	3.03	Knowledge of the effect that a loss of modulation will have on ... DCP	4.14.2
027 Containment Boding Removed	2.03	Knowledge of bus power supplies to ...	3.17.0, 4.1
028 Hydrogen Recombiner and Pump Control			

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Q24	PSS-RN	SEID 6	INW		1	compensation		1	
Q25	ICLAE	SEID 2	INW		1	memory		1	

[illegible][illegible]

Facility: McGuire													Date of Exam: 5/19/00		Exam Level: RO	
Category	K/A #	Topic	Imp.	Points	Question	Lesson Plan	Objective	Source	NRC	Bank	Mod	New	Remarks	Memory	Comp	Analysis
Conduct of Operations	2.1.21	Ability to obtain and verify controlled procedure copy	3.1/3.2	655	ADM-OP	SEQ 8	MOD				1		memory - McGuire 1997	1		
Equipment Control	2.2.2	Ability to manipulate the console controls as required to operate the facility between shutdown and designated power levels	4.0/3.5	465	GEN-EHC	none	MOD				1		comprehension - McGuire 1999	1		
Radiation Control	2.3.1	Knowledge of 10 CFR 20 and related facility radiation control requirements	2.6/3.0	125	RAD-RP	SEQ 71	NRC	1					comprehension - McGuire 1997		1	
	2.3.4	Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized	2.5/3.1	353	RAD-RP	SEQ 59, 60	MOD				1		analysis - Catwba 1999			1
	2.3.10	Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure	2.9/3.3	661	RAD-RP	EQ 19, 22, 2	new					1	analysis			1
Control																
Emergency Procedures and Plan	2.4.7	Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material	3.4/3.7	120	TH-FF	SEQ 6	MOD					1	analysis - MOD McGuire 1997			1
Their 3 Point Total																
13																

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward			
<p align="center">Instructions [Refer to Appendix B for additional information regarding each of the following concepts.]</p> <p>1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.</p> <p>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).</p> <p>3. Check the appropriate box if a psychometric flaw is identified:</p> <ul style="list-style-type: none"> The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information). The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc). The answer choices are a collection of unrelated true/false statements. More than one distractor is not credible. One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem). <p>4. Check the appropriate box if a job content error is identified:</p> <ul style="list-style-type: none"> The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content). The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory). The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons). The question requires reverse logic or application compared to the job requirements. <p>5. Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?</p> <p>6. For any "U" ratings, at a minimum, explain how the Appendix B psychometric attributes are not being met.</p>														
97	H	3				✓		ok				S	U1, '97 exam. How is distractor "C" plausible given that ND-15B and NI-136B are "B" Train components while ND-30A is an "A" Train component? McG Response: Changed distractor "C" to link with train "A". <u>FINAL STATUS: OK.</u>	
207	H	3						ok				S	U1, '97 exam. NOTE: Why define Mode 5 in the stem? (...prior to exceeding 200°F in Mode 5.) What other parts of T.S. will be provided to avoid making question direct lookup? McG Response: Changed stem to delete the words "in mode 5." Agreed to include related T.S. to reference package. <u>FINAL STATUS: OK.</u>	
216	F	2						ok				S	Both, '97 exam. Distractor analysis says both "B" and "D" are correct. Which? McG Response: "B" is the correct answer. Corrected distractor analysis for "D". <u>FINAL STATUS: OK.</u>	
217	F	3						ok				S	U1, modified. <u>FINAL STATUS: OK.</u>	
372	F	2	✓					ok				E	U2, '99 exam. Minor editorial in stem to get verb tense consistent. Change 2 nd sentence to read "... and reached step 15 where they were directed..." McG Response: Changed words as requested. <u>FINAL STATUS: OK.</u>	
390	H	4						ok				S	U1, '99 exam. <u>FINAL STATUS: OK.</u>	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
430	H	3					✓	✓				U	U1, modified. Distractor "B" is a true statement. (Yes, the pumps start and valves open sometime after 0.8 psig.) Change word "after" to "when". Also make same change to correct answer "A" for consistency. This is <u>not</u> an SRO-only level of knowledge (on '99 exam it was an RO-only question). REPLACE. McG Response: Agreed this was not an SRO-only question. Replaced it with Q# 51 (see below) and made this one a "both" question. Made above changes to Q# 430. <u>FINAL STATUS: This question is OK for use on both exams.</u>
479	H	4	✓					✓				E	U1, '99 exam. Explain again why this is SRO only. (I know it was only on the '99 SRO exam, but it does not appear to be an "SRO-only" question. LP says it is an RO knowledge area too.) Stem says "... what is the earliest time (if any) that...". The "if any" part doesn't make sense because there is no option to pick where flow is normal. Suggest we delete it. Also, the distractor analysis for "C" appears to be in error. Shouldn't it be EMF-50 vice 36? McG Response: They explained rationale for making this an SRO-only question. I concurred. For the second comment, they showed that if an applicant was confused whether to use MOSRR or MRIRR, then the stem wording is plausible. I concurred. For the last comment, they corrected the error. <u>FINAL STATUS: OK.</u>
504	H	4	✓				✓	✓				U	U1, modified '99 Catawba. Generally, question is good. However, it appears that may have two correct answers due to minor lack of stem focus. Correct answer "C" is 'anytime after 0203'. Answer "D" is a time after 0203, so is also correct. Change stem to read "WOOTF...describes the earliest time the operators ..." Explain why this is a SRO-only question. McG Response: Agreed this was not an SRO-only question. Replaced it with Q# 191 (see below) and made this one a "both" question. Made the stem changes above to Q# 504. <u>FINAL STATUS: This question is OK for use on both exams.</u>
507	H	3						ok				S	U2, '99 Catawba. <u>FINAL STATUS: OK.</u>
512	F	3						ok				S	U2, '99 Catawba. <u>FINAL STATUS: OK.</u>
595	F	3						ok				S	Both, '99 retake. <u>FINAL STATUS: OK.</u>
599	F	3						ok				S	U1, new. Justify correct answer. McG Response: They explained the correct answer. <u>FINAL STATUS: OK.</u>
610	H	3						✓				S	U2, new. Explain why this is a SRO-only question. McG Response: Provided rationale for SRO-only designation. <u>FINAL STATUS: OK.</u>
617	H	4					✓	ok				U	U2, new. I'm concerned that "B" is also correct. Sure it may not provide long term relief, but why is wrong? McG Response: Changed initial PRT pressure to 9 psig. Modified distractor "B" to make incorrect. <u>FINAL STATUS: OK.</u>
618	H	4						ok				S	U1, new. Says that Curve Book curve 1.10D is provided, but only table given in distractor analysis. Is curve missing or is only a table given? Also analysis of curve 1.10C uses a NC pressure of 1150 psi. Shouldn't 1210 psi be used? Tough Q. McG Response: All data pages of the Curve Book are called "curves", even when they are tables. Agreed that analysis of curve 1.10C had wrong pressure marked. Corrected error. This had no impact on correct answer. <u>FINAL STATUS: OK.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
1/51	H	3										S	Changed to SRO ONLY as of 4/25/00. C. Payne <u>FINAL STATUS: OK.</u>
2/60	F	3										S	<u>FINAL STATUS: OK.</u>
3/82	F	2										S	<u>FINAL STATUS: OK.</u>
4/111	F	2										S	<u>FINAL STATUS: OK.</u>
5/120	H	3										S	<u>FINAL STATUS: OK.</u>
6/125	H	3										S	<u>FINAL STATUS: OK.</u>
7/150	H	3										S	<u>FINAL STATUS: OK.</u>
8/152	H	4	X				X					E	Stem needs revision to illicit the correct answer. "Should" in the stem leaves room for error. Recommend changing the question stem to read "What is the earliest time that the operator is allowed...". Discussed with licensee on 4/25/00. Licensee agreed to revise stem to read "What is the earliest time that operators may block the source range nuclear instruments?" <u>FINAL STATUS: OK.</u>
9/191	H	3										S	Changed to SRO Only. B. Haagensen 4/25/00 <u>FINAL STATUS: OK.</u>
10/241	H	3										S	<u>FINAL STATUS: OK.</u>
11/242	H	4										S	<u>FINAL STATUS: OK.</u>
12/243	H	3										S	<u>FINAL STATUS: OK.</u>
13/264	H	2										S	<u>FINAL STATUS: OK.</u>
14/298	H	4				X						E	To enhance the credibility and technical validity of distractor 'B', modify to read "... 80 to 100 psig <u>below</u> normal". Discussed with licensee on 4/25/00. Licensee agreed with the recommended enhancement to this question. <u>FINAL STATUS: OK.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
15/307	H	3	X				X					E	<p>Multiple correct distractors.</p> <p>Recommend that question stem be modified to include statement that no fuel damage or failure has occurred. If not revised, it appears that distractor 'B' is a potentially correct answer.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed and revised stem to include information on fuel integrity. <u>FINAL STATUS: OK.</u></p>
16/308	F	2	X									E	<p>Editorial change to correct stem to read "Which one... is required?"</p> <p>Discussed with licensee on 4/25/00. Licensee agreed and corrected stem. <u>FINAL STATUS: OK.</u></p>
17/311	H	4				X						E	<p>Distractor 'B' not credible.</p> <p>Distractor 'B' should be modified to incorporate values directly from Steam Tables. Temperature range should be adjusted to 227 -231.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed with the enhancement and modified question to incorporate values directly from Steam Tables. <u>FINAL STATUS: OK.</u></p>
18/330	F	2					X					E	<p>Multiple correct distractors.</p> <p>Modify distractor "D" to make it less credible.</p> <p>Discussed with licensee on 4/25/00. Modified by Haagensen 4/25/00. <u>FINAL STATUS: OK.</u></p>
19/338	F	2										S	<u>FINAL STATUS: OK.</u>
20/353	H	3										S	<u>FINAL STATUS: OK.</u>
21/401	H	3	X									U	<p>Question does not agree with K/A.</p> <p>Question written for dropped rod in lieu of stuck rod. Question needs to be significantly modified or replaced.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed and question was replaced. New question provided by B. Haagensen (Contractor).</p>
22/404	F	2										S	<u>FINAL STATUS: OK.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
23/407	H	4				X						E	Distractors A and B are not credible. Discussed with licensee on 4/25/00. Licensee agreed that all distractors could be enhance to improve the LOD and LOK. LOD and LOK increased. Question All distractors were subsequently modified and deemed acceptable. <u>FINAL STATUS: OK.</u>
24/412	H	3										S	<u>FINAL STATUS: OK.</u>
25/415	H	3										S	<u>FINAL STATUS: OK.</u>
26/447	H	3										S	<u>FINAL STATUS: OK.</u>
27/451	H	3	X	X								E	Stem contains cues which provide information on the normal position of the instrument air to station air cross-connect valve, (VI-820). This information reduces the level of difficulty and is not necessary to correctly answer this question. Recommended that VI-820 position be deleted from stem. Should be modified to read "VI system is in the normal lineup." Discussed with licensee on 4/25/00. Licensee agreed to remove the information on the actual position of valve VI-820 from stem of question. <u>FINAL STATUS: OK.</u>
28/465	H	2				X						E	Reorder distractors to make distractors "C" and "D" similar to "A" and "B". Verify "B" is correct. Discussed with licensee on 4/25/00. Question modified and additional actions were added to distractors. Question LOD/LOK not affected. <u>FINAL STATUS: OK.</u>
29/469	H	4										S	To enhance stem focus, define MRIRR. Discussed with licensee on 4/25/00. Recommended change made. <u>FINAL STATUS: OK.</u>
30/471	F	2	X									E	Editorial revisions recommended to modify question stem to read "Which...should the...select?" Distractor analysis for "D" is incorrect. Discussed with licensee on 4/25/00. Licensee agreed and editorial changes were made with no measurable impact on question content or validity. <u>FINAL STATUS: OK.</u>
31/477	H	3										S	<u>FINAL STATUS: OK.</u>
32/501	H	3										S	<u>FINAL STATUS: OK.</u>
33/531	F	2										S	<u>FINAL STATUS: OK.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
34/538	H	3	X									E	<p>Question stem lacks necessary information.</p> <p>Recommend modifying stem to include statement that Channel I is the controlling channel.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed with this revision. <u>FINAL STATUS: OK.</u></p>
35/591	H	3				X						E	<p>More than one distractor not credible.</p> <p>Recommend modifying distractor 'A' to read "Power remains at 5%. Control rods step out."</p> <p>Discussed with licensee on 4/25/00. Licensee modified distractor 'A' to improve distractor credibility. <u>FINAL STATUS: OK.</u></p>
36/592	H	3					X					E	<p>Multiple correct distractors. Distractor 'D' is partially correct based on AP-21 foldout page 1, Item 3.</p> <p>Discussed with licensee on 4/25/00. Licensee provided clarification regarding training techniques which resulted in an improved understanding of the distractor. The distractor and question left "As is". <u>FINAL STATUS: OK.</u></p>
37/593	H	3	X				X					E	<p>Unnecessary cues in question stem. Question stem states that "Pressurizer pressure is maintained until trip signal received at 0205". Operators are aware that Unit should be manually tripped prior to automatic actuation if possible. Therefore distractor "C" 0205 is not a credible distractor.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed to modify question stem to delete information that an automatic trip signal was received at 0205. <u>FINAL STATUS: OK.</u></p>
38/594	H	3				X						U	<p>Review distractors for possible modification. A and D to be reviewed by facility. Discussed with licensee on 4/25/00. Licensee agreed that distractors C and D were not credible and also agreed that the correct answer provided unnecessary cues. Distractors B, C, and D were modified. <u>FINAL STATUS: OK.</u></p>
39/596	F	2				X						E	<p>Editorial changes necessary including changing effect to affect and Clarifying distractor "C". The distractor reads as Rx is tripped at ASP.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed with the changes and revised the question stem to correct the editorial changes. <u>FINAL STATUS: OK.</u></p>
40/597	H	3	X									E	<p>Editorial change to modify question stem to read "Which combination of alarms..."</p> <p>Discussed with licensee on 4/25/00. Licensee agreed. <u>FINAL STATUS: OK.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
41/598	H	4										S	<u>FINAL STATUS: OK.</u>
42/600	H	3					X					E	Multiple correct answers. Distractor 'D' is a possible correct answer. When is distractor 'D' an incorrect answer. (RO/SRO discretion). Question stem should also include the correct values for IR indication for the operating conditions. Discussed with licensee on 4/25/00. Licensee disagreed that distractor 'D' was a potentially correct answer. In this situation, tripping the reactor is an incorrect response. IR amps equivalent was correct for actual values. <u>FINAL STATUS: OK.</u>
43/601	F	2										S	<u>FINAL STATUS: OK.</u>
44/602	H	4										S	<u>FINAL STATUS: OK.</u>
45/603	H	4										S	<u>FINAL STATUS: OK.</u>
46/604	H	3										S	<u>FINAL STATUS: OK.</u>
47/605	H	4										S	<u>FINAL STATUS: OK.</u>
48/606	F	2										S	<u>FINAL STATUS: OK.</u>
49/607	F	2										S	<u>FINAL STATUS: OK.</u>
50/608	F	2										S	<u>FINAL STATUS: OK.</u>
51/609	F	2										S	This question is very similar to bank question #607. Discussed with licensee on 4/25/00. Meets K/A. Examiner agreed. Question left "As Is". <u>FINAL STATUS: OK.</u>
52/611	H	3										S	<u>FINAL STATUS: OK.</u>
53/612	F	2					X					E	Although instrument response for the other meters (EMF 51, 52, 9) may not be as sensitive, there may be some indication of core uncover. Discussed with licensee on 4/25/00. Licensee clarified training materials and expectations and stated that the question was valid with only one correct distractor. Examiner agreed. Question left "As Is". <u>FINAL STATUS: OK.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
54/613	H	3	X			X						U	<p>1. Technical errors in question stem.</p> <p>Recommend modifying stem or distractors to make Unit # consistent.</p> <p>2. Stem focus.</p> <p>Revise it motor current statement to read pump motor current decreases.</p> <p>Discussed with licensee on 4/25/00. Question stem modified to correct the identified deficiencies. <u>FINAL STATUS: OK.</u></p>
55/615	F	2										S	<u>FINAL STATUS: OK.</u>
56/616	F	2					X					E	<p>Correct answer was not properly identified. Distractor 'A' is not the correct answer.</p> <p>Discussed with licensee on 4/25/00. Information revised to indicate that Distractor 'B' is the correct answer <u>FINAL STATUS: OK.</u></p>
57/619	H	4				X						E	<p>Multiple correct answers. Confirm that use of Steam Tables is an unacceptable method for determining core conditions.</p> <p>Discussed with licensee on 4/25/00. Licensee verified that the use of Steam Tables was unacceptable and only one correct answer was listed. The examiner agreed. Question left "As Is". <u>FINAL STATUS: OK.</u></p>
58/620	F	2										S	<u>FINAL STATUS: OK.</u>
59/621	H	3										S	<u>FINAL STATUS: OK.</u>
60/622	H	3										S	<u>FINAL STATUS: OK.</u>
61/623	F	2										S	<u>FINAL STATUS: OK.</u>
62/624	H	3										S	<u>FINAL STATUS: OK.</u>
63/625	H	3										S	<u>FINAL STATUS: OK.</u>
64/626	H	3										S	<u>FINAL STATUS: OK.</u>
65/627	F	2										S	<u>FINAL STATUS: OK.</u>
66/628	H	3										S	<u>FINAL STATUS: OK.</u>
67/629	H	3	X									E	<p>Editorial correction to delete "With" at the start of the stem.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed and corrections made. <u>FINAL STATUS: OK.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
68/630	H	3										S	Check UFSAR. Ccontainment pressure trend for LOCA and MSLB to confirm that Distractor A is a correct answer. Peak pressures may be a magnitude higher but may occur at the same time as the event when all doors function properly. Discussed with licensee on 4/25/00. Licensee has stated that data from Catawba supports the assertion that Distractor 'A' is correct. Question remains "As Is". <u>FINAL STATUS: OK.</u>
69/631	F	2										S	<u>FINAL STATUS: OK.</u>
70/632	F	2										S	<u>FINAL STATUS: OK.</u>
71/633	H	3										S	<u>FINAL STATUS: OK.</u>
72/634	F	2										S	<u>FINAL STATUS: OK.</u>
73/635	F	2										S	<u>FINAL STATUS: OK.</u>
74/637	H	3										S	<u>FINAL STATUS: OK.</u>
75/638	H	3										S	<u>FINAL STATUS: OK.</u>
76/639	H	3										S	<u>FINAL STATUS: OK.</u>
77/640	H	3										S	<u>FINAL STATUS: OK.</u>
78/641	F	2										S	<u>FINAL STATUS: OK.</u>
79/642	F	1										U	Question is of low discriminatory value. Discussed with licensee on 4/25/00. Licensee agreed and replaced this question. Examiner reviewed and accepted. <u>FINAL STATUS: OK.</u>
80/643	H	3										S	<u>FINAL STATUS: OK.</u>
81/644	F	2										S	<u>FINAL STATUS: OK.</u>
82/645	F	2										S	<u>FINAL STATUS: OK.</u>
83/646	H	3										S	<u>FINAL STATUS: OK.</u>
84/647	H	4										S	<u>FINAL STATUS: OK.</u>
85/648	F	2				X						E	Distractors need modification to correct psychometric flaws. Edit distractors to make all on "Float charge". Discussed with licensee on 4/25/00. Licensee agreed. <u>FINAL STATUS: OK.</u>
86/651	F	2										S	<u>FINAL STATUS: OK.</u>
87/652	F	2										S	<u>FINAL STATUS: OK.</u>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
88/654	F	2				X						E	<p>Edit stem to read "... all RC pumps trip?". Remove "all" from distractor 'A' to make distractors credible.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed. Distractors replaced. <u>FINAL STATUS: OK.</u></p>
89/655	F	1										S	<p>Low discriminatory value.</p> <p>Recommend changing question stem to reduce the # of days to less than 14 and thereby making "A" the correct answer.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed with the proposed modification. <u>FINAL STATUS: OK.</u></p>
90/656	H	3										S	<u>FINAL STATUS: OK.</u>
91/658	F	2				X	X					E	<p>Multiple correct answers. Distractors 'A' and 'C' may be correct answers.</p> <p>Discussed with licensee on 4/25/00. Distractor 'A' was a correct answer prior to recently implemented procedure changes. The licensee stated that there is only one correct answer. This question left "As Is". <u>FINAL STATUS: OK.</u></p>
92/661	H	3	X									E	<p>Question stem needs to be modified to read "What is the maximum allowable working time that worker A may perform without exceeding the alert flag exposure limit for external exposure" to avoid having more than one correct answer.</p> <p>Discussed with licensee on 4/25/00. Licensee agreed and recommended changes were made. <u>FINAL STATUS: OK.</u></p>
93/666	F	2										S	<u>FINAL STATUS: OK.</u>
94/668	H	3										S	<u>FINAL STATUS: OK.</u>
95/669	H	3										S	<u>FINAL STATUS: OK.</u>
96/670	F	2										S	<u>FINAL STATUS: OK.</u>
97/671	F	2										S	<u>FINAL STATUS: OK.</u>
98/672	H	2										S	<u>FINAL STATUS: OK.</u>
99/677	F	2										S	
100/67 B	F	2				X						E	<p>Two non-plausible distractors.</p> <p>Recommend modifying distractor 'A' read "RTD Loop B failed high".</p> <p>Discussed with licensee on 4/25/00. Correction made. B Haagensen. <u>FINAL STATUS: OK.</u></p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. U/E/S	6. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		
Instructions													
[Refer to 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: <ul style="list-style-type: none"> • The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information). • The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc). • The answer choices are a collection of unrelated true/false statements. • More than one distractor is not credible. • One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem). 												
4.	Check the appropriate box if a job content error is identified: <ul style="list-style-type: none"> • The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content). • The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory). • The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons). • The question requires reverse logic or application compared to the job requirements. 												
5.	Based on the reviewer's judgment, is the question as written (U)nacceptable (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?												
6.	For any "U" ratings, at a minimum, explain how the Appendix B psychometric attributes are not being met.												

Facility: McGuire		Date of Exam: 5/19/00		Exam Level: RO/SRO	
Item Description		Initials			
		a	b	c	
1.	Answer key changes and question deletions justified and documented	BH	N/A	B	
2.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	BH	N/A	B	
3.	Grading for all borderline cases (80% +/- 2%) reviewed in detail	BH	N/A	B	
4.	All other failing examinations checked to ensure that grades are justified	N/A	N/A	N/A	
5.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	BH	N/A	B	
Printed Name / Signature		Date			
a. Grader	Betty L Holbrook / B.L. HOLBROOK	6/7/00			
b. Facility Reviewer(*)	N/A				
c. NRC Chief Examiner (*)	D.C. PAYNE	6/8/00			
d. NRC Supervisor (*)	H. CHRISTENSEN	6/9/00			
(*) 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 Examination: <u>5/8-12 & 5/22-25/2000</u>
Task Description	Date Complete	
1. Facility written exam comments or graded exams received and verified complete	5/25/00	
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	6/8/00	
3. Operating tests graded by NRC examiners	6/20/00	
4. NRC Chief examiner review of written exam and operating test grading completed	6/23/00	
5. Responsible supervisor review completed	6/23/00	
6. Management (licensing official) review completed	6/23/00	
7. License and denial letters mailed	6/26/00	
8. Facility notified of results	6/23/00	
9. Examination report issued (refer to NRC MC 0610)	6/23/00	
10. Reference material returned after final resolution of any appeals	N/A	