

Administrative Documents

(Yellow Paper)

McGuire 2007-301

March 19 - 22, 2007 (operating)

March 29, 2007 (written)

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

ANSWER KEYS

Facility: McGuire 2007-301		Dates of Examination: 3/19-22 and 29/2007	
Examination Prepared By:		Facility NRC	
		Written / Operating Test Written / Operating Test	
Target Date*	Task Description (Reference)	Chief Examiner's Initials	
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	8/2006	
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	10/26/2007	
-120	3. Facility contact briefed on security and other requirements (C.2.c)	10/26/2007	
-120	4. Corporate notification letter sent (C.2.d)	10/26/2007	
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	01/15/2007	
{-75}	6. Integrated examination outline(s) due, including Forms ES-201-2, ES-201-3, ES-301-1, ES-301-2, ES-301-5, ES-D-1's, ES-401-1/2, ES-401-3, and ES-401-4, as applicable (C.1.e and f; C.3.d)	12/14/2006	
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	12/19/2006	
{-45}	8. Proposed examinations (including written, walk-through JPMs, and scenarios, as applicable), supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, and ES-401-6), and reference materials due (C.1.e, f, g and h; C.3.d)	01/15/2007	
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.i; C.2.g; ES-202)	02/15/2007	
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.i; C.2.i; ES-202)	03/05/2007	
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	03/05/2007	
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	03/05/2007	
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	03/15/2007	
-7	14. Final applications reviewed; 1 or 2 (if >10) applications audited to confirm qualifications / eligibility; and examination approval and waiver letters sent (C.2.i; Attachment 4; ES-202, C.2.e; ES-204)	03/12/2007	
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	03/02/2007	
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	03/19/2007	
<p>* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee. [Applies only] {Does not apply} to examinations prepared by the NRC.</p>			

Facility:		Date of Examination:		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	aps	zk	ff
	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.	aps	zk	ff
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	aps	zk	ff
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	aps	zk	ff
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.	aps	zk	ff
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity, and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s), and that scenarios will not be repeated on subsequent days.	aps	zk	ff
	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.	aps	zk	ff
3. W / T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form (3) no tasks are duplicated from the applicants' audit test(s) (4) the number of new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	aps	zk	ff
	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	aps	zk	ff
	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.	aps	zk	ff
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	aps	zk	ff
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	aps	zk	ff
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	aps	zk	ff
	d. Check for duplication and overlap among exam sections.	aps	zk	ff
	e. Check the entire exam for balance of coverage.	aps	zk	ff
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	aps	zk	ff
Printed Name/Signature		Date		
a. Author	<u>Linda P. Gabbert / 21. P. Selt</u>	<u>12-12-06</u>		
b. Facility Reviewer (*)	<u>Fred B Kirk Jr / Fred B Kirk Jr</u>	<u>12-12-06</u>		
c. NRC Chief Examiner (#)	<u>GERARD W. LASICK / Gerard W. Lasick</u>	<u>12-18-06</u>		
d. NRC Supervisor	<u>Paul Ray</u>	<u>1/18/07</u>		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.				

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/19/07 AND 3/26/07 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 3-19-07 AND 3-26-07. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. CHARLES W. SAWYER, JR	Exam Lead	<i>Charles W Sawyer Jr</i>	11-1-06	<i>Chuck Sawyer</i>	3-29-07
2. Linda P. Gebbert	Exam Lead	<i>L P Gebbert</i>	11-1-06	<i>L P Gebbert</i>	3-29-07
3. FRED B. KIRK JR	Facility REP	<i>Fred B Kirk</i>	11-5-06	<i>F B Kirk</i>	3-29-07
4. Nathan P. Poston	Operations Trng Instructor	<i>Nathan P Poston</i>	11-16-06	<i>Nathan P Poston</i>	4/2/07
5. Chuck Jacobs	Ops Instructor	<i>Chuck Jacobs</i>	12-4-06	<i>Chuck Jacobs</i>	3-29-07
6. TIM JOHNSON	SRD / SHIFT SUPERVISOR	<i>Tim Johnson</i>	12-12-06	<i>TJ</i>	4/2/07
7. DANIEL E. HELTON	RO / VALIDATION	<i>Daniel E Helton</i>	12-27-06	<i>Daniel E Helton</i>	4/4/07
8. DOUGLAS C. WAKEFIELD	RO	<i>Douglas C Wakefield</i>	12-27-06	<i>Douglas C Wakefield</i>	3-29-07
9. MARK W. BELL	RO / VALIDATION	<i>Mark W Bell</i>	12-28-06	<i>Mark Bell</i>	4-2-07
10. MELISSA D. SILVER	RO	<i>Melissa D Silver</i>	1-2-07	<i>Melissa D. Silver</i>	4/2/07
11. MARVIN GOLD	SRD	<i>Marvin Gold</i>	1-2-7	<i>Marvin Gold</i>	3-29-7
12. Steven M. Steller	RO	<i>Steven M Steller</i>	1-2-07	<i>Steven M Steller</i>	4-2-07
13. TROY R. GARDNER	RO	<i>Troy R Gardner</i>	1-3-07	<i>Troy R Gardner</i>	3-29-07
14. JIM SUPRELA	OPS INSTRUCTOR	<i>Jim Suprela</i>	1-9-07	<i>J Suprela</i>	4-3-07 (1)
15. David Bice	RO	<i>David Bice</i>	1-5-07	<i>David Bice</i>	4/13/07

NOTES:

(1) (*) per telecon by
D.P. Gebbert 4-3-07

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the weeks(s) of 3/19/07 - 3/26/07 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 3/19/07 - 3/26/07. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1. JOSEPH ARSENAULT	AUTHOR	<i>Joseph Arsenault</i>	10/12/06	See page 5	4-2-07	
2. PATRICK R. JACKSON	SRO/STA	<i>Patrick R. Jackson</i>	1/2/07	<i>Patrick R. Jackson</i>	3/29/07	
3. William L. Knight	RO	<i>William L. Knight</i>	1/2/07	<i>William L. Knight</i>	4-5-07	
4. JAMES C. KERNS	RO	<i>James C. Kerns</i>	1-2-07	<i>James C. Kerns</i>	4/3/07	
5. Lawrence J. Kurka	SRO/STA	<i>Lawrence J. Kurka</i>	1/2/07	<i>Law Kurka</i> *	4-4-07	①
6. RICHARD F. MORRIS	SRO	<i>Richard F. Morris</i>	1-2-2007	<i>R. F. Morris</i>	4-2-07	
7. MICHAEL R. GRENBECKI	RO	<i>Michael R. Grenbecki</i>	1/5/07	<i>Michael Grenbecki</i> *	4-11-07	①
8. ROBERT M. POPE	HLP SUPERVISOR	<i>Robert M. Pope</i>	1/5/07	<i>R. M. Pope</i>	3-29-07	
9. CHARLES ELANK	IT/PROFESSIONAL	<i>Charles Elank</i>	1/9/07	<i>Charles Elank</i>	4-2-07	
10. W. R. BAKER	IT Prof - sim support	<i>W. R. Baker</i>	1/19/07	<i>W. R. Baker</i>	3/29/07	
11. D. J. Taylor	SIMULATOR ENGINEER	<i>D. J. Taylor</i>	1/19/07	<i>D. J. Taylor</i>	3/29/07	
12. Newton A. Smith, III	OPS - staff	<i>Newton A. Smith, III</i>	1/10/07	<i>Newton A. Smith, III</i>	4/2/07	
13. NORMA T. CHERRY	ADMIN Spec.	<i>Norma T. Cherry</i>	1/15/07	<i>Norma Cherry</i>	4/3/07	
14. John H. Sadler	Nov. Sta. Inspector	<i>John H. Sadler</i>	2/27/07	<i>John Sadler</i> *	4-3-07	①
15. Stephen L. Bushnell	SRO	<i>Stephen L. Bushnell</i>	3-5-07	<i>Stephen L. Bushnell</i>	3-29-07	

NOTES:

ps. 2

① * via telephon by Linda Gobbert

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC requalification examinations scheduled for the week(s) of 3-19-07 - 3/26/07 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC's chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those operators scheduled to be administered these examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC's chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC requalification examinations administered during the week(s) of 3/19/07 - 3/26/07. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those operators who were administered these examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE
1. GARY DANIELS	OPS INSTRUCTOR	<i>[Signature]</i>	1/11/07	See pg. 4	3-29-07
2. Ross Cooke	Shift Support	<i>[Signature]</i>	1/10/07	See pg. 4	4-2-07
3. DENNIS MOORE	SHIFT SUPERVISOR	<i>[Signature]</i>	3/05/07	Dennis E Moore	3-29-07
4. RET Elliot	SHIFT SUPERVISOR	<i>[Signature]</i>	3-6-07	Ret Elliot	4-2-07
5. Vickie McGinnis	Admin specialist	<i>[Signature]</i>	3/8/07	Vickie McGinnis	3-29-07
6. GARY GRAHAM	OPS INSTRUCTOR	<i>[Signature]</i>	3/19/07	Gary Graham	4-2-07
7. Scotty Bradshaw	Supt of OPS	<i>[Signature]</i>	3/19/07	Scotty Bradshaw	3-29-07
8. Tracy Rhodes	OPS Manager Trn.	<i>[Signature]</i>	3/19/07	Tracy Rhodes	3-29-07
9. Alan Orton	OPS TRAINING MGR	<i>[Signature]</i>	3/19/07	Alan Orton	3-30-07
10. SUTHASIT KUMAR	SIM SUPPORT	<i>[Signature]</i>	3/19/07	Suthasit Kumar	4-9-07 ①
11. H.L. MASSEY	OPS INSTRUCTOR	<i>[Signature]</i>	3/20/07	H.L. Massey	3-29-07
12. Robert P. Weaver	OPS INSTRUCTOR	<i>[Signature]</i>	3/20/07	R.P. Weaver *	4-2-07 ①
13. GARY L. GRAHAM	OPS INSTRUCTOR	<i>[Signature]</i>	4/2/07	Gary Graham	4-2-07
14.					
15.					

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pg. 3

① * via telecon by Linda Gabbert

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/19/07 - 3/26/07 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 3/17/07 - 3/24/07 from the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1. GARY DANIELS	OPS/INST	[Signature]	1/10/07	[Signature]	3-29-07
2. MT Lee	OPS/STAFF	[Signature]	03/17/07	[Signature]	03/29/07
3. Gary Chapp	OPS/RO	[Signature]	03/11/07	[Signature]	3-29-07
4. Ross Cooke	Sim Support	[Signature]	1-10-07	[Signature]	4-2-07
5. Glenn M. Jackson	OPS/RO	[Signature]	01-14-07	[Signature]	03-30-07
6. Steven J. Andrews	OPS/RO	[Signature]	02-14-07	[Signature]	03-30-07
7. Hubert C. Damron	OPS/SUPERVISOR	[Signature]	2/15/07	[Signature]	04-4-07
8. Bruce Bonette	OPS/RO	[Signature]	02/05/07	[Signature]	05/30/07
9. Chad Underwood	OPS/RO	[Signature]	02/16/07	[Signature]	4/5/07
10. Ronnie Locklear	OPS/RO	[Signature]	02/16/07	[Signature]	03/29/07
11. Duane C. Miller	OPS/RO	[Signature]	03/12/07	[Signature]	3/29/07
12. Will Fowlf	OPS/RO	[Signature]	03/13/07	[Signature]	04-07-07
13. STEVE COOPER	OPS/RO	[Signature]	13/04/07	[Signature]	2/24/07
14.					
15.					

NOTES:

* per telecon by JK SURTAN
[Signature]

pg. 4

P.1

(623) 535-1307

Joe Arsenault

Apr 03 07 07:50a

1. Pre-Examination

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	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE	NOTE
1.	JOSEPH ARSENAULT	AUTHOR	<i>Joseph Arsenault</i>	10/12/06	<i>Joseph Arsenault</i>	4/2/07	
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pg. 5

ES-301, Rev. 9

Administrative Topics Outline

Form ES-301-1

Facility: _____ McGuire _____		Date of Examination: March 19 2007
Examination Level: RO SRO		Operating Test Number: HLP-23 NRC
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
A-1a Conduct of Operations	M,R	JPM: Calculate QPTR with a Inoperable Power Range Instrument. K/A: 2.1.25 Ability to obtain and interpret station reference manuals.
A-1b Conduct of Operations	M, R	JPM: Thermal Margin Calculation in Mode 5 K/A: 2.1.3 Knowledge of Shift Turnover Practices
A-2 Equipment Control	D,R	JPM: SLC Determination of Operable EFA Zone K/A: 2.2.25 Knowledge of bases in tech specs for limiting conditions of operations and safety limits.
A-3 Radiation Control	M,R	JPM: Evaluate LWR Paperwork K/A: 2.3.11 Ability to Control Radiation Releases.
A-4 Emergency Plan	D,R	JPM: Declare an Emergency Classification and complete the ENS notification form. K/A: 2.4.41: Knowledge of the emergency action level threshold and classifications.
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria: (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1 ; randomly selected)		

ES-301, Rev. 9

Administrative Topics Outline

Form ES-301-1

Facility: _____ McGuire _____		Date of Examination: March 19 2007
Examination Level: RO SRO		Operating Test Number: HLP-23 NRC
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
A-1a Conduct of Operations	M,R	JPM: Perform a Manual AFD Calculation K/A: 2.1.25 Ability to obtain and interpret station reference manuals.
A-1b Conduct of Operations	N,S	JPM: Monitor Critical Safety Function Status Trees K/A: 2.1.19 Ability to use plant computer to obtain and evaluate parametric information on system or component status.
A-2 Equipment Control	M,R	JPM: Perform a Manual NC Leakage Detection PT K/A: 2.2.12 Knowledge of surveillance procedures.
A-3 Radiation Control	M,R	JPM: Perform Unit Vent Flow Calculation of Containment Air Release. K/A: 2.3.11 Ability to control Radiation Releases
Emergency Plan		
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria: (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1 ; randomly selected)		

Facility: <u>McGuire</u>	Date of Examination: <u>March 19, 2007</u>	
Exam Level: RO SRO-I SRO-U	Operating Test No.: <u>HLP-23 NRC</u>	
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. 006/ Increase Level in Cold Leg Accumulator 1A (CLA-68)	D, S	SF-2
b. 002/ Calculate Boric Acid Potentiometer Setting and Begin Manual Makeup to the VCT (NV-207A) (SROU)	A, D, P, S	SF-1
c. 006/ Transfer to Hot Leg Recirc (NC-115A) (SROU)	A, D, E, S	SF-3
d. 005/ Respond to Leak on ND While at Midloop (ND-258A) (SROU)	N, A, L, S	SF-4P
e. 064/ Manually Sequence Loads after a Blackout (DG-13)	D, S	SF-6
f. 103/ Manually Align Phase A Isolation Components Following a LOCA (ISE-259A)	N, A, S	SF-5
g. 073/ Respond to 1EMF-35 Hi Rad Alarm (EMF-257)	N, S	SF-7
h. 045/ Perform Main Turbine Overspeed Trip Test (EHC-154A)	A, D, S	SF-4S
In-Plant Systems [@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. 028/ Start the Hydrogen Recombiner (VX-20) (SROU)	D, E	SF-5
j. 061/ Start and Stop 2TD CAP (CA-256) (SROU)	N, R	SF-4S
k. 062/ Restore Normal Power to 1ETA and Shutdown D/G 1A (DG-175)	D	SF-6
<p>@ All control room (and in-plant) systems must be different and serve different safety functions; in-plant systems and functions may overlap those tested in the control room.</p>		

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

Facility: <u>McGuire</u>		Date of Examination: <u>3-19-07</u>		Operating Test Number:	
1. General Criteria			Initials		
			a	b*	c#
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	APJ	ZK	[Signature]	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	APJ	ZK	[Signature]	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	APJ	ZK	[Signature]	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	APJ	ZK	[Signature]	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	APJ	ZK	[Signature]	
2. Walk-Through Criteria			--	--	--
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> · initial conditions · initiating cues · references and tools, including associated procedures · reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee · operationally important specific performance criteria that include: <ul style="list-style-type: none"> – detailed expected actions with exact criteria and nomenclature – system response and other examiner cues – statements describing important observations to be made by the applicant – criteria for successful completion of the task – identification of critical steps and their associated performance standards – restrictions on the sequence of steps, if applicable 	APJ	ZK	[Signature]	
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.	APJ	ZK	[Signature]	
3. Simulator Criteria			--	--	--
The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.		APJ	ZK	[Signature]	
	Printed Name / Signature	Date			
a.	Author <u>Linda Gabbert / Linda P. Selt</u>	<u>3-12-07</u>			
b.	Facility Reviewer(*) <u>Fred B Kirk / Fred B Kirk</u>	<u>3-12-07</u>			
c.	NRC Chief Examiner (#) <u>GERARD W LASKA / Gerard W Laska</u>	<u>3-15-07</u>			
d.	NRC Supervisor <u>Robert Haag (Robert HAAG)</u>	<u>3-16-07</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

Facility: <i>McGuire</i>		Date of Exam: <i>3-19-07</i>		Scenario Numbers: <i>1 / 2 / SPARE</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>aps</i>	<i>zk</i>	<i>jk</i>			
2.	The scenarios consist mostly of related events.	<i>aps</i>	<i>zk</i>	<i>jk</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>aps</i>	<i>zk</i>	<i>jk</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>aps</i>	<i>zk</i>	<i>jk</i>			
5.	The events are valid with regard to physics and thermodynamics.	<i>aps</i>	<i>zk</i>	<i>jk</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>aps</i>	<i>zk</i>	<i>jk</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>jk</i>			
8.	The simulator modeling is not altered.	<i>aps</i>	<i>zk</i>	<i>jk</i>			
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.	<i>aps</i>	<i>zk</i>	<i>jk</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.5 of ES-301.	<i>aps</i>	<i>zk</i>	<i>jk</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>aps</i>	<i>zk</i>	<i>jk</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>aps</i>	<i>zk</i>	<i>jk</i>			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<i>aps</i>	<i>zk</i>	<i>jk</i>			
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes					
1.	Total malfunctions (5-8)	<i>5 / 6 / 5</i>	<i>aps</i>	<i>zk</i>			
2.	Malfunctions after EOP entry (1-2)	<i>2 / 2 / 2</i>	<i>aps</i>	<i>zk</i>			
3.	Abnormal events (2-4)	<i>4 / 4 / 4</i>	<i>aps</i>	<i>zk</i>			
4.	Major transients (1-2)	<i>1 / 1 / 2</i>	<i>aps</i>	<i>zk</i>			
5.	EOPs entered/requiring substantive actions (1-2)	<i>2 / 2 / 1</i>	<i>aps</i>	<i>zk</i>			
6.	EOP contingencies requiring substantive actions (0-2)	<i>1 / 0 / 2</i>	<i>aps</i>	<i>zk</i>			
7.	Critical tasks (2-3)	<i>2 / 3 / 2</i>	<i>aps</i>	<i>zk</i>			

Facility:		McGuire		Date of Exam:		March, 19, 2007		Operating Test No.:		HLP-23 Crew A							
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		1			2			3			4						
		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			
	RX		-					6									1
RO ₁	NOR		3					--						1	1	1	1
SRO-I	I/C		1,5					3,4						4	4	4	2
SRO-U	MAJ		7					7						2	2	2	1
	TS		---					--						0	0	2	2
	RX			2			-							1	1	1	0
RO ₂	NOR			-			5							1	1	1	1
SRO-I	I/C			4,6			1,2, 4							5	4	4	2
SRO-U	MAJ			7			7							2	2	2	1
	TS			--			--							0	0	2	2
RO	RX	2												1	1	1	0
	NOR	3												1	1	1	1
SRO-I	I/C	1,4, 5,6												4	4	4	2
SRO-U ₁	MAJ	7												1	2	2	1
	TS	2,4, 6												3	0	2	2
RO	RX					6								1	1	1	0
	NOR					5								1	1	1	1
SRO-I	I/C					1,2, 3,4								4	4	4	2
SRO-U ₃	MAJ					7								1	2	2	1
	TS					1,4								2	0	2	2

Instructions:

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

Author:

[Handwritten Signature]

NRC Reviewer:

[Handwritten Signature]

Facility: McGuire		Date of Exam: March, 19, 2007									Operating Test No.: HLP-23 Crew B						
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		1			2			3			4						
		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													
	RX		-				6						1	1	1	0	
RO ₃	NOR	3					--						1	1	1	1	
SRO-I	I/C	1,5					3,4						4	4	4	2	
SRO-U	MAJ	7					7						2	2	2	1	
	TS	---					--						0	0	2	2	
	RX			2			-						1	1	1	0	
RO ₄	NOR			-			5						1	1	1	1	
SRO-I	I/C			4,6			1,2, 4						5	4	4	2	
SRO-U	MAJ			7			7						2	2	2	1	
	TS			--			--						0	0	2	2	
RO	RX	2											1	1	1	0	
	NOR	3											1	1	1	1	
SRO-I	I/C	1,4, 5,6											4	4	4	2	
SRO-U ₂	MAJ	7											1	2	2	1	
	TS	2,4, 6											3	0	2	2	
RO	RX					6							1	1	1	0	
	NOR					5							1	1	1	1	
SRO-I	I/C					1,2, 3,4							4	4	4	2	
SRO-U ₄	MAJ					7							1	2	2	1	
	TS					1,4							2	0	2	2	

Instructions:

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

Author:

L.P. Gelfand

NRC Reviewer:

Edward W. Lester

Facility: McGuire		Date of Examination: March 19, 2007				Operating Test No.:						
Competencies Crew A	RO 1/SRO-I SRO-U			RO 2/SRO-I SRO-U			RO/SRO-I SRO-U1			RO/SRO-I SRO-U3		
	SCENARIO			SCENARIO			SCENARIO			SCENARIO		
	ATC 1	BOP 2		BOP 1	ATC 2		1			2		
	Interpret/Diagnose Events and Conditions	1,5,7	3,4,7		4,6,7	1,2,4, 7		1-7			1-7	
Comply With and Use Procedures (1)	1,3,5,7	3,4,6, 7		2,4,6, 7	1,2,4, 5,7		1-7			1-7		
Operate Control Boards (2)	1,3,5,7	3,4,6, 7		2,4,6, 7	1,2,4, 5,7		1-7			1-7		
Communicate and Interact	1-7	1-7		1-7	1-7		1-7			1-7		
Demonstrate Supervisory Ability (3)	-	-		-	-		1-7			1-7		
Comply With and Use Tech. Specs. (3)	-	-		-	-		2,4, 6			1,4		
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.												

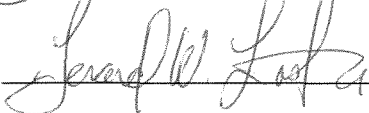
Instructions:

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

Author: _____



NRC Reviewer: _____



Facility: McGuire		Date of Examination: March 19, 2007				Operating Test No.:				
Competencies Crew B	RO 3/SRO-I SRO-U		RO 4/SRO-I SRO-U				RO/SRO-I SRO-U2		RO/SRO-I SRO-U4	
	SCENARIO		SCENARIO				SCENARIO		SCENARIO	
	ATC 1	BOP 2	BOP 1	ATC 2			1		2	
	Interpret/Diagnose Events and Conditions	1,5,7	3,4,7	4,6,7	1,2,4, 7			1-7		1-7
Comply With and Use Procedures (1)	1,3,5,7	3,4,6, 7	2,4,6, 7	1,2,4, 5,7			1-7		1-7	
Operate Control Boards (2)	1,3,5,7	3,4,6, 7	2,4,6, 7	1,2,4, 5,7			1-7		1-7	
Communicate and Interact	1-7	1-7	1-7	1-7			1-7		1-7	
Demonstrate Supervisory Ability (3)	-	-	-	-			1-7		1-7	
Comply With and Use Tech. Specs. (3)	-	-	-	-			2,4, 6		1,4	
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.										

Instructions:

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

Author: _____

[Handwritten Signature]

NRC Reviewer: _____

[Handwritten Signature]

3-15-2007

Facility:	McGuire 1 & 2	Date of Exam:	3/19/2007-3 3/29/2007	Exam Level:	RO/SRO
Item Description	Initial				
	a	b*	c#		
1. Questions and answers technically accurate and applicable to facility.	JG	2K	JG		
2. a. NRC K/As referenced for all questions. b. Facility learning objectives referenced as available.	JG	2K	JG		
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	JG	2K	JG		
4. The sampling process was random and systematic. (If more than 4 RO and 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL Program Office)	JG	2K	JG		
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: _____ the audit exam was systematically and randomly developed, or _____ the audit exam was completed before the license exam was started, or _____ the examinations were developed independently, or XX the licensee certifies that there is no duplication, or _____ other (explain)	JG	2K	JG		
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		
	33/4	5/2	37/19		
7. Between 50 and 60 percent of the question on the RO exam are written at the comprehension/analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right	Memory	C/A			
	32 / 9	43 / 16			
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	JG	2K	JG		
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.	JG	2K	JG		
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	JG	2K	JG		
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet.	JG	2K	JG		
Printed Name / Signature			Date		
a. Author	Joseph G. Arsenault	<i>Joseph G. Arsenault</i>	3/3/2007		
b. Facility Reviewer (*)	Fred B Kirk Jr	<i>Fred B Kirk Jr</i>	3/12/2007		
c. NRC Chief Examiner (#)	GERARD W. LASKA	<i>Gerard W. Laska</i>	3/15/2007		
d. NRC Regional Supervisor	Robert HAAG	<i>Robert Haag</i>	3/22/2007		
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

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only			
<p>Instructions</p> <p>[Refer to Section D of ES-401 and 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. • 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). 																
<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. <u>Check questions that are sampled</u> for conformance with the approved K/A and those that are <i>designated SRO-only</i> (K/A and license level mismatches are unacceptable).</p>																
<p>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?</p>																
<p>7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).</p>																
1	H	2												S	<p>003A4.05 Appears to match K/A. The question states that "1A NC Pump Seal Leakoff Hi" ... Is this the way the indicator is labeled on the MCB? Otherwise SAT. NEW. (IAW Procedure)</p> <p>Discussed that this is a recorder will verify prior to administration. 2/20/2007 Verified Correct 3/1/2007.</p>	
2	F	1				X								U	<p>003K1.01 Appears to match K/A. Distractors A and B are not credible. (Especially with the statement "describes an Interlock" in the stem) Need to develop better distractors. Low discriminatory value as written. NEW</p> <p>Changed interlock to condition. SAT 2/20/2007</p>	

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
3	F	2										X		U	<p>004K2.02 Does not appear to match the K/A. CVCS-Knowledge of bus power supplies to the following: Make up pumps. K2.01 asks for the knowledge of bus power supplies to the Boric acid transfer pumps. I believe this K/A refers to reactor water makeup pumps or the equivalent. UNSAT ; NEW</p> <p>Changed to ask Which ONE of the following describes where the circuit breaker for Boric Acid transfer pump A on Unit 1 is located. Changed distractor A to 1ELXA. SAT 2/20/2007.</p>
4	H	2				X								E	<p>005A1.01 Question appears to match K/A. Assuming that the HX bypass valves are manual and not automatic this is the way it should operate. Distractor D is not plausible, if total system flow increases, why would cooldown rate go down? Need to strengthen distractor. Enhancement needed BANK.</p> <p>Changed B and D distractors to have the cooldown rate remains the same changed stem to Total ND system flow, and NCS cooldown rate. SAT 2/20/2007</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			
5	H	2											X		U	006K5.08 Not sure it meets the K/A. Will get a second opinion. Not sure if distractors B and D are credible. Can ND pump discharge be aligned directly to NS? Need more information. (IAW Procedure) Got Second opinion, Does NOT meet K/A. Reviewed, Needs more work will Look at later. 2/20/2007 Distractor B needs to be more wrong (NPSH) Reference 3/1/2007
6	F	2													S	006K1.10 Appears to match K/A. SAT NEW
7	H	2					X								U	007A1.02 Appears to match K/A. IAW Procedure. As this question is written all responses are correct. All of these methods would reduce PRT Pressure. This could be appealed by an applicant. The Question needs to be bounded by a procedure. UNSAT/ NEW. Changed to 100 % power, and added procedure. SAT 2/20/2007
8	F	2													S	007K3.01 Kind of matches K/A. Very simple. SAT BANK
9	F	2		X											E	008K1.01 Appears to match K/A, but very simple. One can determine the correct supplies and answer by observing that YM is listed twice as the normal, so it must be the normal and that RN must be the back up because it is listed twice as the back up. Does the plant have a demineralized water system? Enhancement Needed. Did not have any other sources that could be used. Will leave question as is. SAT 2/20/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
10	F	2													E	010K2.01 Appears to match K/A. Is bank D the only bank that is powered from the SSF. If so the applicant need not know the power supplies, just have the knowledge that one of bank D heaters is supplied from the SSF (Only one answer has an SSF power source). Enhancement Needed. NEW Changed first column A to LXG and B to SMXG to B. SAT 2/20/2007.
11	H	2	X												E	012A4.04 Appears to match K/A. How can the SR level trip bypass be in bypass during a reactor startup. This is not really operationally credible. If the switch were in bypass the startup would be on hold. Enhancement Needed Agreed not credible to do a start up with switch in block. Rewrite Question. 2/20/2007 Forgot to change question will still work on. 3/2/2007
12	H	2				X									U	013G2.1.33 Appears to match K/A. Distractors A and C are not credible. (What would make the applicant think that the NV pump being out of service would have an effect on TRN B NS operability? Also the applicant is not determining if entry to a tech spec is required, but when. UNSAT/NEW Many changes made to question look at again and decide if it is okay. 2/20/2007 Changed times, appears to be okay 3/1/2007

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			
13	H	2	X												E	013K3.02 Appears to match K/A. Stem should read If a Large LOCA occurs at this time which One of the following would occur. Enhancement Needed NEW Many changes with stem. SAT 2/20/2007.
14	H	2													S	022K4.05 Appears to match K/A. SAT BANK
15	H	2													S	025K1.02 Appears to match K/A. SAT MODIFIED
16	H	2				X									U	026K3.02 Appears to match K/A. Distractors C and D do not appear to be credible. Are there any other interlocks that effect two different systems? Need to work on distractors C and D. UNSAT Removed when required. Appears to be some connection between systems. NEW SAT 2/20/2007
17	H	2													S	039A2.01 Appears to match K/A. SAT BANK (cooling down at max attainable rate is somewhat of a stretch.) 2/20/2007

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			
18	H	2													E	059A1.07 Appears to match K/A (Not a B&W plant so no need for ICS). Need to add "Assume No Operator Action". Does the transmitter number need to be used? Enhancement Needed. Bank Changed as requested. SAT 2/20/2007
19	H	2													E	059A3.02 Appears to match K/A Levels should be approximately 49% etc. Not so sure about the 55% level. Second part of stem should say and the SG level that the CF system should be currently maintaining, or what is the program level for this power. Enhancement Needed. NEW Not Correct as written, will look at another question or change wording on this question.2/20/2007 Replacement question appears to be acceptable, but B distractor needs to be fixed. Not credible as written. Trip Program 3/2/2007
20	F	2													S	061G2.1.32 Appears to match K/A. SAT NEW Added IAW ADD PROCEDURE 2/20/2007
21	H	2													S*	061K6.02 Appears to match K/A Kind of simple. *Will the D/G start and tie on to the ETA bus? Otherwise SAT NEW 2/20/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
22	H	2													E	062K2.01 Appears to match K/A. Three of the distractors/answers have NCP B continues to run, why would anyone pick NCP B Trips? Need to find a balance for distractors. Enhancement needed. BANK Completely re-wrote question. SAT 2/20/2007 Distractor analysis to be fixed.
23	F	2													S	063A3.01 Appears to match K/A. SAT. NEW
24	H	2													S	064G2.4.4 Appears to match K/A. Question appears to be SAT. Not a new question. This question is in many banks. BANK Changed B distractor to have procedure begin the response. SAT 2/20/2007
25	F	2													S	073A4.03 Appears to match K/A. SAT NEW SAT 2/20/2007

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		
26	F	2										X		U	<p>076A1.02 Does not appear to match K/A. The question has a phase B isolation that isolates Component cooling water to containment. The K/A asks for SWS effects on either Reactor building or turbine building closed cooling water systems. A loss of SWS has not occurred in this question. Question is also at the memory level. UNSAT</p> <p>NEW Got Second opinion Does NOT meet K/A</p> <p>Replace Question 2/20/2007 Question concept is okay but needs some more work on distractors.</p> <p>3/2/2007</p>
27	F	2				X								U	<p>078G2.1.32 Appears to match K/A.. Distractors B and C are not credible. How can air being isolated from the compressor prevent oil from entering the compressor, and how can air being aligned to the compressor prevent overheating? These distractors need work. UNSAT</p> <p>NEW</p> <p>Will continue to work on question 2/20/2007. Replaced question New question needs to have distractor C fixed. 3/2/2007</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			
28	H	2				X									E	103A3.01 Appears to match K/A. Distractor B is not credible, can you receive a MSLI without a phase A? Why two bullets on conditions? Enhancement needed. BANK Changed all distractors and S/G pressure rcs pressure, and temp. Check to ensure plausible. SAT 2/20/2007
29	H	2													S	002K6.07 Appears to match K/A. SAT BANK. SAT 2/20/2007
30	F	2													S	015K5.07 Appears to match K/A. SAT NEW added and why. SAT 2/20/2007
31	F	2	X	X		X									U	027K1.01 Appears to match K/A. Teaching in stem. Distractors B and C are not credible injection phase flow does not come from the sump, and recirc phase does not come from the FWST. UNSAT. BANK Continue to work on Some changes made more needed. 2/20/2007 SAT 3/1/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
32	H	2	X								X			E	028A1.01 Appears to match K/A. Distractor Delta uses backwards logic (not). Change distractor to say Maintain hydrogen igniters in service, obtain a recommendation from ... Change the H2 level in stem to greater than 4%. (4.1 or 4.2 etc.) This will add credibility to distractor D and C. Enhancement needed. MOD. Need original question to verify modification. Changed concentration of H2, and distractor B and D SAT 2/20/2007.
33	H	2												S	035K5.01 Appears to match K/A. Kind of simple SAT BANK SAT 2/20/2007
34	H	2	X									X		U	045A2.17 May not meet K/A. What is the DEH malfunction? A load rejection occurring is not always a DEH Malfunction. What causes the DEH Turbine Runback alarm to come in? Are these results credible. Question needs some work. UNSAT as is. NEW. Continue to work on Question. Changed several distractors, need to verify that a DEH speed control signal failure will not be a correct failure to cause. IAW AP 3.3/1/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only				
35	H	2	X	X												U	055K3.01 Appears to match K/A. Stem states that Tave remains constant but the distractor analysis states that Tave will rise. Distractor B (correct answer) needs to have the malfunction described like the other distractors. (Leakage/dilution/insertion) It sticks out like a sore thumb. UNSAT. BANK Changed tave to remain constant, and distractor B to have a malfunction. SAT 2/20/2007
36	F	2														S	071K4.05 Appears to match K/A. SAT. MOD SAT2/20/2007
37	F	2	X			X										E	079A2.01 Appears to match K/A. Stem should state IAW AP-22. A Should read Check 1VI-820 closed. C distractor should read Check 1 VI-820 open. This is very simple. Low discriminatory value. This is a system question. Some reference to the procedure may improve the distractors. IAW enclosure 5 of ... Enhancement needed. NEW SAT 2/20/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws					5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	# units	Back-ward	Q=K/A	SRO Only			
38	F	1		X									X		U	086K6.04 Not sure it actually meets the K/A. Will check with another Examiner. (The loss or malfunction should be fire/smoke/heat detector). With the procedure given as a reference the question becomes a direct lookup. This is also a bank question and will probably have little discriminatory value. UNSAT Second Opinion Does NOT Meet K/A. BANK Gerry to Supply New K/A.2/20/2007 086K4.02 selected as new K/A 3/12007
39	F	2	X												E	007EK1.04 Appears to match K/A. Stem should read ...source range instruments to energize, and which of the following could cause the source range instrument to remain de-energized. Or something positive. Do not believe that this is a new question. Enhancement needed. BANK Made changes to conditions 2 in stem "prevent from energizing automatically". SAT 2/20/2007
40	H	1				X									U	008G2.2.22 Appears to match K/A. Distractors C and D are not credible. With RCS pressure dropping how would an applicant ever believe that NC System pressure safety limit could be exceeded. Very simple question, this becomes a question of whether or not pressure effect of delta t or op delta t. UNSAT NEW Make a table for OtdT and Table. 2/20/2007 changed format SAT 3/1/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
41	H	2				X									U	009EK2.03 Appears to match K/A. Distractors C and D are not credible. Very simple. Need to see original to ensure that the question is modified. UNSAT MOD Changed the whole question SAT 2/20/2007 .
42	F	2													S	011EA2.13 Appears to match K/A. SAT . NEW
43	F	2													S*	015AA1.05 Appears to match K/A. Very similar to #29. Need to discuss. Otherwise SAT NEW . SAT 2/20/2007
44	F	2		X									X		U	025AK1.01 Does not really meet K/A. The K/A is looking the operational implications of a loss of RHRS . The question stem describes a loss of RHR and asks what can stop the heat up. (The heat up is the operational implication). Also giving the procedure to the applicants would make this a direct lookup. UNSAT . BANK Replace Question 2/20/2007 Still needs some work Need to add reason and implications 3/1/2007
45	F	2													S	026AK3.01 Appears to match K/A. Very Simple . SAT NEW 2/20/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
46	F	1				X									U	027AK1.02 Appears to match K/A. B and C distractors not credible. Very Little discriminatory value. This question is written at the fundamental level. UNSAT NEW Write question on controller failure. 2/20/2007 Changed question Backup heaters on and surge line temp increase/decrease. PORV and Sprays...3/1/2007
47	H	2					X								U	038EA1.20 Kind of matches K/A. However this question would be appropriate even if a tube rupture did not exist. It also appears that performance of step 16.0 of E-0 would have CA throttled to all SG's because their level is greater than 11% and adverse numbers are not required. So it is not apparent which answer is correct. A, B, or C could be correct answers. UNSAT. NEW Pick a new K/A.2/20/2007 New Question seems ok, check wording. Otherwise SAT. 3/1/2007
48	F	1				X									U	040AK1.07 Appears to match K/A. A and B distractors are not plausible. Both distractors will have already happened prior to initiation of feed water flow. Question needs work. UNSAT BANK Work on distractors, if can't new K/A. 2/20/2007 New K/A 040AK1.06 Appears to be okay, K/A is sort of matched. SAT Old bank question. 3/2/2007

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												S	055EK3.02 Appears to match K/A. Distractors should be balanced. Two initiates and two establishes. Otherwise SAT . BANK . Changed all distractors and reworted SAT 2/20/2007 .
50	H	2												S	056AA1.04 Appears to match K/A. SAT BANK SAT 2/20/2007
51	H	2												S	057AA2.06 Appears to match K/A. SAT NEW SAT 2/20/2007
52	H	2												S	058G2.4.50 Appears to match K/A. Distractor analysis states that A is the correct and incorrect answer. Need to clarify. Question is marked as modified, but there is no bank question present. Supply band question Otherwise SAT MOD? Validated voltage new. Otherwise SAT 2/20/2007

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	H	2													E	<p>062AA1.05 Appears to match K/A. The way the question is written the applicant need only know that the lo-lo level alarm would be received on the OAC only, and would not have to show the knowledge level of whether or not a radiation alarm would be expected. Need to work on question so that it will still cover all parts of the K/A Enhancement Needed.</p> <p>NEW Determined not to match K/A.</p> <p>Pick New K/A SAT 2/20/2007 changed to 062AA1.06 Changed Question Distractor D should change value to 11,500 gpm. Add B train in service in stem. Change to stem also for maximum rate. 3/2/2007 SAT</p>
54	F	2													S	<p>065AK3.08 Appears to match K/A. Kind of simple. SAT.</p> <p>NEW SAT 2/20/2007</p>
55	F	2													S	<p>WE04EK3.3 Appears to match K/A. SAT BANK SAT 2/20/2007</p>
56	H	2													E	<p>WE12EA1.2 Appears to match K/A. Teaching in stem and this could lead applicant to select an incorrect answer. Remove as SG pressures decrease. Use what actions will be required to mitigate the event or something similar. Enhancement Needed</p> <p>BANK SAT 2/20/2007</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
57	H	2	X			X	X								U	003AK3.07 Appears to match K/A. The way the distractors are developed, an applicant does not need to know if the limit was exceeded, only the reason to narrow the answer to a or b. need to move the reasons around to develop a question to test the reason, setpoint and action. The LCO bases states: If the parameters that are outside the limit cannot be restored, the plant must be brought to a mode in which the LCO does not apply. How long is allowed to bring the parameter back into compliance? Are you assuming in this case that the temperature cannot be restored? Question needs some work. UNSAT NEW SAT 2/20/2007 Changed C and D first part to Has not been exceeded.
58	H	1													U	011AA2.01 Appears to match K/A. Question is not testing the how the channel failed. (All are High) but some of the indication are those associated with a channel failing low. Need to incorporate this into the question Channel I fails high, Channel I fails low, Channel II fails high Channel II fails low, with appropriate alarms. As written Low discriminatory value. Enhancement Needed. BANK Rewrite Question 2/20/2007 Still needs some work. Make two channel 1 fails high and two channel II fail low and have alarms as is . Then SAT. 3/2/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
59	H	2												S	032AA1.01 Appears to match K/A. Need to ensure that none of these status lights could be on after maintenance. SAT NEW Think About!! Leave question as is. SAT 3/1/2007
60	F	2												E	036AK1.03 Appears to match K/A. Distractor C is not credible (Radiation levels). What procedure is used to determine this. The Stem should state IAW.... Enhancement Needed. NEW Changed radiation levels to intermediate range and need to verify procedure to back up correct answer. SAT 2/20/2007
61	F	1				X								U	059AK2.01 Appears to match K/A. Distractors A and B do not appear to be credible. If two pumps are required and three are running how could the loss of one pump secure the release? How long has it been since the change to remove WM-46 as a release path. This may not be credible either. UNSAT BANK Rewrote distractors A, B, and C. SAT 2/20/2007
62	F	2												E	060AK3.03 Kind of matches K/A. Good Attempt. Use of the word <i>preferred</i> in the stem is not desirable. Use something like: Which ONE of the following methods would cause the least amount of contamination in mitigating the event? Use procedures, IAW ES-3.1 etc. Otherwise Okay. Enhancement Needed. BANK Changed as requested. SAT 2/20/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
46	F	1				X									U	027AK1.02 Appears to match K/A. B and C distractors not credible. Very Little discriminatory value. This question is written at the fundamental level. UNSAT NEW Write question on controller failure. 2/20/2007 Changed question Backup heaters on and surge line temp increase/decrease. PORV and Sprays...3/1/2007
47	H	2					X								U	038EA1.20 Kind of matches K/A. However this question would be appropriate even if a tube rupture did not exist. It also appears that performance of step 16.0 of E-0 would have CA throttled to all SG's because their level is greater than 11% and adverse numbers are not required. So it is not apparent which answer is correct. A, B, or C could be correct answers. UNSAT. NEW Pick a new K/A.2/20/2007 New Question seems ok, check wording. Otherwise SAT. 3/1/2007
48	F	1				X									U	040AK1.07 Appears to match K/A. A and B distractors are not plausible. Both distractors will have already happened prior to initiation of feed water flow. Question needs work. UNSAT BANK Work on distractors, if can't new K/A. 2/20/2007 New K/A 040AK1.06 Appears to be okay, K/A is sort of matched. SAT Old bank question. 3/2/2007

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												S	055EK3.02 Appears to match K/A. Distractors should be balanced. Two initiates and two establishes. Otherwise SAT . BANK . Changed all distractors and reworted SAT 2/20/2007 .
50	H	2												S	056AA1.04 Appears to match K/A. SAT BANK SAT 2/20/2007
51	H	2												S	057AA2.06 Appears to match K/A. SAT NEW SAT 2/20/2007
52	H	2												S	058G2.4.50 Appears to match K/A. Distractor analysis states that A is the correct and incorrect answer. Need to clarify. Question is marked as modified, but there is no bank question present. Supply band question Otherwise SAT MOD? Validated voltage new. Otherwise SAT 2/20/2007

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	H	2													E	<p>062AA1.05 Appears to match K/A. The way the question is written the applicant need only know that the lo-lo level alarm would be received on the OAC only, and would not have to show the knowledge level of whether or not a radiation alarm would be expected. Need to work on question so that it will still cover all parts of the K/A Enhancement Needed.</p> <p>NEW Determined not to match K/A.</p> <p>Pick New K/A SAT 2/20/2007 changed to 062AA1.06 Changed Question Distractor D should change value to 11,500 gpm. Add B train in service in stem. Change to stem also for maximum rate. 3/2/2007 SAT</p>
54	F	2													S	<p>065AK3.08 Appears to match K/A. Kind of simple. SAT.</p> <p>NEW SAT 2/20/2007</p>
55	F	2													S	<p>WE04EK3.3 Appears to match K/A. SAT BANK SAT 2/20/2007</p>
56	H	2													E	<p>WE12EA1.2 Appears to match K/A. Teaching in stem and this could lead applicant to select an incorrect answer. Remove as SG pressures decrease. Use what actions will be required to mitigate the event or something similar. Enhancement Needed</p> <p>BANK SAT 2/20/2007</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
57	H	2	X			X	X								U	003AK3.07 Appears to match K/A. The way the distractors are developed, an applicant does not need to know if the limit was exceeded, only the reason to narrow the answer to a or b. need to move the reasons around to develop a question to test the reason, setpoint and action. The LCO bases states: If the parameters that are outside the limit cannot be restored, the plant must be brought to a mode in which the LCO does not apply. How long is allowed to bring the parameter back into compliance? Are you assuming in this case that the temperature cannot be restored? Question needs some work. UNSAT NEW SAT 2/20/2007 Changed C and D first part to Has not been exceeded.
58	H	1													U	011AA2.01 Appears to match K/A. Question is not testing the how the channel failed. (All are High) but some of the indication are those associated with a channel failing low. Need to incorporate this into the question Channel I fails high, Channel I fails low, Channel II fails high Channel II fails low, with appropriate alarms. As written Low discriminatory value. Enhancement Needed. BANK Rewrite Question 2/20/2007 Still needs some work. Make two channel 1 fails high and two channel II fail low and have alarms as is . Then SAT. 3/2/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
59	H	2												S	032AA1.01 Appears to match K/A. Need to ensure that none of these status lights could be on after maintenance. SAT NEW Think About!! Leave question as is. SAT 3/1/2007
60	F	2												E	036AK1.03 Appears to match K/A. Distractor C is not credible (Radiation levels). What procedure is used to determine this. The Stem should state IAW.... Enhancement Needed. NEW Changed radiation levels to intermediate range and need to verify procedure to back up correct answer. SAT 2/20/2007
61	F	1				X								U	059AK2.01 Appears to match K/A. Distractors A and B do not appear to be credible. If two pumps are required and three are running how could the loss of one pump secure the release? How long has it been since the change to remove WM-46 as a release path. This may not be credible either. UNSAT BANK Rewrote distractors A, B, and C. SAT 2/20/2007
62	F	2												E	060AK3.03 Kind of matches K/A. Good Attempt. Use of the word <i>preferred</i> in the stem is not desirable. Use something like: Which ONE of the following methods would cause the least amount of contamination in mitigating the event? Use procedures, IAW ES-3.1 etc. Otherwise Okay. Enhancement Needed. BANK Changed as requested. SAT 2/20/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
63	H	2												S	067G2.1.23 Appears to match K/A. SAT NEW Changed several distractors. SAT 2/20/2007
64	H	2												E	WE08G2.1.27 Kind of meets the function portion of K/A (function of P.1) Good attempt. Distractor C is not credible. Think of something else that would cause a cooldown or raise pressure. For instance, start another SI pump to increase subcooling, etc. Enhancement Needed. BANK Changed all distractors except A. Verify C is incorrect. SAT 2/20/2007
65	F	2		X		X								U	WE10EK2.2 Appears to match K/A. Distractors C and D are subsets of A so if either one was wrong A would also be wrong. As written the applicant need only know the reason for the PRZ level requirement to get the answer correct. This question needs some work. UNSAT BANK Changed two distractors at 90% and 25-35%. And only two reasons. SAT 2/20/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
63	H	2												S	067G2.1.23 Appears to match K/A. SAT NEW Changed several distractors. SAT 2/20/2007
64	H	2												E	WE08G2.1.27 Kind of meets the function portion of K/A (function of P.1) Good attempt. Distractor C is not credible. Think of something else that would cause a cooldown or raise pressure. For instance, start another SI pump to increase subcooling, etc. Enhancement Needed. BANK Changed all distractors except A. Verify C is incorrect. SAT 2/20/2007
65	F	2		X		X								U	WE10EK2.2 Appears to match K/A. Distractors C and D are subsets of A so if either one was wrong A would also be wrong. As written the applicant need only know the reason for the PRZ level requirement to get the answer correct. This question needs some work. UNSAT BANK Changed two distractors at 90% and 25-35%. And only two reasons. SAT 2/20/2007

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			
66	F	1											X		U	<p>G2.1.10 Does not totally meet the K/A. The limitation is met but not the conditions. The conditions for this T/S is less than one hour, so include the action required for example:</p> <p>A. 2735 psig; reduce pressure to less than the setpoint within 1 hour.</p> <p>B. 2735 psig ;reduce pressure to less than the setpoint within 5 minutes.</p> <p>C. 2765 psig; reduce pressure to less than the setpoint within 1 hour.</p> <p>D 2765 psig; reduce pressure to less than the setpoint within 5 minutes.</p> <p>Question as written has very little discriminatory value. UNSAT BANK. Will make changes as requested SAT 2/20/2007</p>
67	F	2					X								E	<p>G2.1.8 Appears to match K/A. Distractor A could be argued correct. If IAE could locally cause a SM isolation signal it would be the same as C. The Stem of the question needs to have in accordance with AP-17. Enhancement Needed BANK Made changes as required SAT 2/20/2007</p>
68	F	2													S	<p>G2.2.30 Appears to match K/A. SAT BANK changed distractor B add to the core. SAT 2/20/2007</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		
69	H	2												S	G2.2.2 Appears to match K/A. For Distractors C add until the Control Rod Bank Lo Limit is clear, and on D add ...ensure the Control Rod Bank Lo alarm clears as Xenon... Need original question to verify that question is modified. otherwise SAT . MOD Check procedure and ensure all distractors are incorrect except for the correct answer. SAT 2/20/2007
70	F	2												S	G2.2.3 Appears to match K/A. SAT BANK 2003 McGuire NRC EXAM. SAT 2/20/2007
71	F	2				X								E	G2.3.10 Appears to Match K/A. Distractor A is not credible. Enhancement needed . BANK Changed A distractor to cation bed. Check ARP actions. SAT 2/20/2007
72	F	2												S	G2.3.4 Kind of matches K/A. Better match would have been a PSE. Still Acceptable. SAT (I don't believe that this is new) BANK SAT 2/20/2007
73	H	2												S	G2.4.24 Appears to match K/A. SAT BANK SAT 2/20/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
76	F	2				X							X	N	U	007G2.1.33 Does not meet K/A. A SLC is not the same as a Technical Specification. I am also not familiar with a plant that uses DRPI to verify shutdown margin. Not mentioned in the DRPI lesson material. Needs Work. UNSAT NEW Changed distractors to include technical specification distractors to determine if T/S is not required and actions are required by the SLC. SAT 2/21/2007
77	H	2											X	N	U	009EA2.23 List as K/A. Question supplied was written to 009EA2.07 as directed upon initial review of ES 401-6. Question still does not meet 009EA2.07 in that the applicant is informed that the surge tank isolation valve indicates closed. The question should test whether the applicant understands whether the valve should have closed for the indications listed. Then as an SRO what T/S was involved or what actions needed to be performed to mitigate the event. This question can be salvaged. UNSAT NEW Changed, removed valve position from stem and changed distractors. SAT 2/21/2007
78	H	2												Y	S	026AA2.03 Appears to match K/A. SAT MOD Changed A distractor, and placed procedures in front of the distractor. Added at 100% power. SAT 2/21/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
79	H	2											N	U	027AA2.12 Appears to match K/A. Distractor D is not credible. If a spray valve opened would the team not enter the Pressurizer pressure anomalies procedure. Need to improve distractors. It would also be prudent to add actions such as select the other channel etc. Needs Enhancement. Borderline SRO only. NEW. Made several changes, position of level selector switch and procedures. Verify that question is correct (only one correct answer) SAT 2/21/2007 Still working 3/2/2007
80	H	1				X							N	U	029G2.1.23 Appears to match K/A. As the question is written, the only plausible choice is the correct choice. The other distractors need to be made better. While in S.1 no one will leave until RX power is less than 5%. Not much discriminating value here. Both distractors C and D would not be performed until after entry into E-0. Needs Work UNSAT. NEW Replace Question Changed original question by changing power and distractors. 3/2/2007
81	H	2											Y	S	055G2.1.20 Appears to match K/A. SAT NEW SAT 2/21/2007
82	H	2											M	E	005G2.4.4 Appears to match K/A. As written the question is very simple and not really SRO only. It could be enhanced to make some of the other distractors more attractive. 1. Put QPTR at 1.023, and 2 Rod M-12 at 194 steps. Needs Enhancement. NEW Changed distractor B and QPTR as requested. SAT 2/21/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only			
83	H	2												M	E	051AA2.02 Appears to match K/A. Distractor D is not plausible. Needs work. Borderline SRO. Enhancement needed. BANK Run, and check on simulator. Changed distractor A, and reduced power to 45%. Otherwise SAT 2/21/2007
84	F	2		X		X								Y	U	060AA2.05 Appears to match K/A. The stem states that the Refueling SRO reports that the alarm was received when withdrawing a spent fuel assembly from the core, this implies that it was heard in containment so C and D distractors would not be credible. Question needs some work. UNSAT NEW Changed several items including No other EMFs in alarm, and other items in stem. SAT 2/21/2007
85	F	2	X	X										Y	U	069G2.1.14 Appears to match K/A. Teaching in stem, an SRO should know which procedure to enter. (You mentioned referred to) Is there more than one procedure to deal with fuel handling problems in containment. If So the distractors should have this in them so that the SRO could also select the procedure as well as the action. Question needs some work. UNSAT NEW Made changes as requested SAT 2/21/2007

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	H	2					X							Y		010A2.03 Appears to match K/A. Unless the value in the COLR is less than 2185 psig distractor C would also be correct. Does the value for pressurizer pressure change, (with the exception of # of transmitters operable) if not the applicant should know the value. With two correct answers the question is UNSAT BANK Changed all distractors to contain > COLR SAT 2/21/2007
87	H	3												Y	S	025A2.04 Good Attempt at a tough K/A. Appears to match. SAT NEW SAT 2/21/2007
88	F	2												Y	S	061G2.1.2 Appears to match K/A. Conditions in the stem are really not credible. I understand the need to have all three CA pumps Inoperable. Is there another way that we could word this to be more credible. (With a fire that damaged both MDCA pumps the reactor may have been tripped using the procedure to fight the fire. Otherwise SAT . BANK Changed the problem with the TDAFW to Bearing replacement. SAT 2/21/2007

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Back-ward	Q=K/A	SRO Only		
89	H	2	X										Y	E	073G2.4.4 Appears to match K/A. Need to state that the plant is aligned for cold leg recirc and that E-1 is in progress. Stating the procedure flow paths as listed is teaching. With this enhancement the question will be SAT . NEW Made enhancements SAT 2/21/2007
90	H	2										X		U	076A2.02 Does not match the K/A. The question should be written to have the applicant respond to lowering RN pressure. This is really a question of which procedure to enter based on plant conditions not affiliated with a loss of RN. Yes RN may be lost in this case but that is not the intent of the K/A. The applicant should enter the AP for a loss of RN and understand actions to take based on RN pressure. UNSAT. NEW Continue to work. Add B trn in service. Otherwise SAT. 3/2/2007
91	H	3										x		U	017A2.01 Does not match K/A. There is no mention of how open or short circuits affect the ITM. This is T/S question and does not match the K/A. Replace. UNSAT NEW Continue to work. New Question written SAT 3/2/2007

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		X									?	Y	E	<p>034G2.2.22 Question may not meet K/A. Will contact HQ's and get clarification on SLCs remedial actions substituting for T/S LCOs. In the past this was not acceptable. With three items in the distractor the applicant need know only any two to select the correct answer. For instance, if I know that the action was to be taken immediately I would discount A and D. Then I would need to only know if the weight was 2000 or 3000, or the correct reason. Question needs some enhancements.</p> <p>NEW Took all the actions out, and have the weight limit and the basis for 10 CFR100 safety limit. This is a tough K/A. I allowed this because they not longer have any T/S associated with Fuel it was all moved to the SLC.</p> <p>SAT 2/21/2007</p>
93	H	2		X										Y	U	<p>045A.12 Appears to match K/A. However with the TS and the COLR page this is a direct lookup. Furthermore if the applicant determines that the flux is outside of the limit there is only one distractor that states the action of the technical specification verbatim, the correct one. UNSAT.</p> <p>NEW include OAC response in distractors C and D. MORE WORK TO BE DONE 2/21/2007</p> <p>Changed distractors C and D. Then SAT 3/2/2007</p>

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation	
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	# units	Back-ward	Q= K/A	SRO Only			
94	F	1?												?	E	G2.1.4 Appears to match K/A. Not sure this is SRO only knowledge. Your procedure states that you may be less than the minimum for 2 hours provided immediate action is taken to restore the shift to minimum requirements. Will discuss SRO Only portion. . Very simple question. Enhancement may be needed. I don't believe that this is new. BANK SAT 2/21/2007
95	H	2												Y	S	G2.1.20 Appears to match K/A. How did RCS pressure drop this far I would expect is to be somewhat higher than this. Remove Uncontrollably on distractor D. Otherwise SAT BANK Gerry to look at 2/21/2007 Okay 3/2/2007 .
96	F	2												Y	S	G2.2.11 Question appears to match K/A. SAT NEW. SAT 2/21/2007
97	H	2												Y	S	G2.3.3 Question appears to match K/A. SAT MOD SAT 2/21/2007
98	H	2												N	U	G2.3.9 Question appears to match K/A, but as written is not SRO only, the operator conducting the release would also be responsible for this knowledge. Need to do something to make it SRO only. UNSAT BANK Need to make SRO Only 2/21/2007 Wrote new question, B and C Prior to initiating the Purge... and placed A and D together.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/units	Backward	Q=K/A	SRO Only		
99	F	2												S	<p>G2.4.27 Question appears to match K/A Appears to be very simple. Why would anyone pick distractors A and C.? Will Discuss. Not a C/A question.</p> <p>NEW</p> <p>SAT 2/21/2007</p>
100	H	2											X	<p>G2.4.45 Kind of Matches K/A. Not sure it is SRO only. With the OPDT reactor trip annunciator in everyone should know that the reactor should be tripped. UNSAT.</p> <p>NEW</p> <p>Needs to be made SRO Only rewrote distractors to include procedure selection SAT 2/21/2007</p>	

Facility: McGuire		Date of Exam: 3-29-07		Exam Level: RO&SRO	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	SP	N/A	SP		
2. Answer key changes and question deletions justified and documented	SP		SP		
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	SP		SP		
4. Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail	SP		SP		
5. All other failing examinations checked to ensure that grades are justified	SP		SP		
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	SP		SP		
Printed Name/Signature		Date			
a. Grader	<u>F. ENRHARDT / <i>[Signature]</i></u>	<u>4/19/07</u>			
b. Facility Reviewer(*)	<u>N/A</u>	<u></u>			
c. NRC Chief Examiner (*)	<u>G.W. USA / <i>[Signature]</i></u>	<u>4/09/07</u>			
d. NRC Supervisor (*)	<u><i>[Signature]</i></u>	<u>6/28/07</u>			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

Facility: McGuire		Date of Exam: 3-29-07		Exam Level: RO SRO	
Item Description	Initials				
	a	b	c		
1. Clean answer sheets copied before grading	OPS				
2. Answer key changes and question deletions justified and documented	OPS				
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5. All other failing examinations checked to ensure that grades are justified	OPS				
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	OPS				
Printed Name/Signature					Date
a. Grader	<u>Linda Gabbert / ZUPBelt</u>				<u>4-3-07</u>
b. Facility Reviewer(*)	_____				_____
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.					

Post-Examination Check Sheet	
Facility: <u>McGuire 2007-301</u> Date of Examination: March 19-22, and 29, 2007	
Task Description	Date Complete
1. Facility written exam comments or graded exams received and verified complete	4/05/2007
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	4/09/2007
3. Operating tests graded by NRC examiners	4/17/2007
4. NRC chief examiner review of operating test and written exam grading completed	4/17/2007
5. Responsible supervisor review completed	4/19/2007
6. Management (licensing official) review completed	4/19/2007
7. License and denial letters mailed	4/20/2007
8. Facility notified of results	4/19/2007
9. Examination report issued (refer to NRC MC 0612)	4/25/2007
10. Reference material returned after final resolution of any appeals	N/A



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December 13, 2006

Mr. W. D. Travers
Regional Administrator, Region II
U. S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth Street, SW Suite 23T85
Atlanta, GA 30303-3415

Subject: McGuire Nuclear Station
Reactor and Senior Reactor Operator Examinations
50-369/2007-301 and 370/2007-301

The enclosed information is provided in response to your request of October 26, 2006. This information is the outline for the McGuire licensed operator examinations scheduled in March 2007.

Specific items provided in response to this request:

ES 201-2, Examination Outline Quality Checklist
ES 201-3, Examination Security Agreement
ES 301-1, Administrative Topics Outline
ES 301-2, Control Room/In-Plant Systems Outline
ES 301-5, Transient and Event Checklist
ES 401-2, PWR Examination Outline
ES 401-3, Generic Knowledge and Abilities
ES 401-4, Record of Rejected K/As
D-1, Scenario Outlines (4)

Questions or comments should be directed to Charles Sawyer at (704) 875-5248 or Kay Crane at (704) 875-4306.

G. R. Peterson

U.S. Nuclear Regulatory Commission

December 13, 2006

Page 2

Mr. James H. Moorman

U.S. Nuclear Regulatory Commission

Operator Licensing and Human Performance Branch

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61 Forsyth St., SW, Suite 23T85

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Mr. Gerry Laska

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January 15, 2007

Mr. William D. Travers
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth Street, SW Suite 23T85
Atlanta, GA 30303-3415

Subject: McGuire Nuclear Station
Reactor and Senior Reactor Operator Initial Examinations
50-369/2007-301 and 370/2007-301

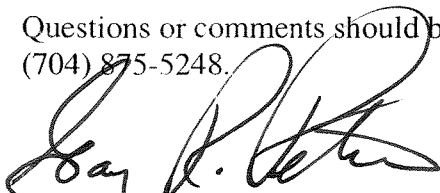
The enclosed information is provided in response to your request of October 26, 2006. This information supports the McGuire licensed operator examinations scheduled during the month of March 2007.

Specific items provided in response to the request:

- Simulator Scenarios - (ES-D-1, Scenario Outline Forms in the book)
- Administrative Topics - (ES 301-1, Administrative Topics Outline Forms in the book)
- Job Performance Measures - (ES 301-2, Control Room Systems and Facility Walk-Through Test Outline Forms in the book)
- Examination Quality Assurance Checklist Form, ES 201-2
- Operating Test Quality Checklist Form, ES 301-3
- Simulator Scenario Quality Checklist Form, ES 301-4
- Transient and Event Checklist Form, ES 301-5
- Competencies Checklist Form, ES 301-6
- Written Examination Quality Checklist, ES 401-6
- Reactor Operator and Senior Reactor Operator Written Questions
- Reference Materials

The McGuire Operations Facility Representative has reviewed and approved the proposed examination material per NUREG-1021, Revision 9, Section 201. The completion of this action is documented in the attached letter January 11, 2007.

Questions or comments should be directed to Kay Crane at (704) 875-4306 or Charles Sawyer at (704) 875-5248.



Gary R. Peterson

U. S. Nuclear Regulatory Commission
January 15, 2007
Page 2

Mr. James H. Moorman
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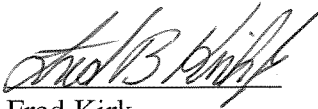
Mr. Gerry Laska
U.S. Nuclear Regulatory Commission
Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
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January 11, 2007

To: Gary Peterson

From: Fred Kirk

As the McGuire facility representative I have reviewed and approved the proposed examination material for the NRC examination to be administered in March 2007. I have determined this material is accurate, operationally valid, and ready for NRC review. This review and approval was completed per NUREG 1021, Revision 9, Section 201.

A handwritten signature in cursive script, appearing to read "Fred B. Kirk".

Fred Kirk
McGuire Operations

McGuire 2007-301 Answer Key RO EXAM

Question

1	D	26	B	51	B
2	C	27	A	52	D
3	B	28	D	53	A
4	A	29	D	54	A
5	C	30	B	55	B
6	A	31	D	56	B
7	C	32	A	57	A
8	B	33	D	58	A
9	C	34	B	59	C
10	C	35	B	60	B
11	A	36	A	61	D
12	B	37	A	62	B
13	C	38	D	63	A
14	B	39	C	64	A
15	D	40	A	65	B
16	B	41	A	66	B
17	D	42	C	67	C
18	C	43	B	68	B
19	D	44	A	69	D
20	D	45	C	70	C
21	B	46	C	71	B
22	A	47	A	72	D
23	A	48	A	73	B
24	D	49	A	74	B
25	B	50	C	75	A

McGuire 2007-301 Answer Key SRO EXAM

Question

- 76 A
- 77 B
- 78 D
- 79 C
- 80 B
- 81 D
- 82 C
- 83 C
- 84 A
- 85 C
- 86 D
- 87 B
- 88 A
- 89 D
- 90 A
- 91 Deleted
- 92 B
- 93 A
- 94 C
- 95 C
- 96 D
- 97 B
- 98 A
- 99 B
- 100 C