

Facility: IP#2

Date of Examination: 3/10/03-3/14/03 OPS TEST

Examinations Developed by: Facility / NRC (circle one)

3/21/03 WRITTEN EXAM

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

* 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: Indian Point Unit 2		Date of Examination: 3/10/2003		
Item	Task Description	Initials		
		A	B	C
1. W R I T T E N	(a) Verify that the outline fits the appropriate model per ES-401	JAB	WLS	JH
	(b) Assess whether the outline was systematically and randomly prepared in accordance with section D.1 of ES-401 and whether all knowledge and ability categories are appropriately sampled	JAB	WLS	JH
	(c) Assess whether the outline overemphasizes any systems, evolutions, or generic topics	JAB	WLS	JH
	(d) Assess whether the justifications for deselected or rejected K/A statements are appropriate	JAB	WLS	JH
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	JAB	WLS	JH
	(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 scenario. Scenarios will not be repeated over successive days.	JAB	WLS	JH
	(c) To the extent possible, assess whether the outline conforms with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D	JAB	WLS	JH
3. W/T	(a) Verify that: (1) the outline contains 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 applicant's audit test, and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks	JAB	WLS	JH
	(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 candidate to implement an alternate path procedure (4) one in-plant task tests the applicant's response to an emergency or abnormal condition (5) the in-plant walkthrough requires the applicant to enter the RCA	JAB	WLS	JH
	(c) Verify that the required administrative topics are covered, with emphasis on performance-based activities	JAB	WLS	JH
	(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.	JAB	WLS	JH
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	JAB	WLS	JH
	(b) Assess whether the 10CFR55.41/43 and 55.45 sampling is appropriate	JAB	WLS	JH
	(c) Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5	JAB	WLS	JH
	(d) Check for duplication and overlap among exam sections	JAB	WLS	JH
	(e) Check the entire exam for balance of coverage	JAB	WLS	JH
	(f) Assess whether the exam fits the appropriate job level (RO or SRO)	JAB	WLS	JH
1. Author	Printed Name/Signature <u>JOSEPH G. ARSENAULT</u> 	Date <u>12/21/02</u>		
2. Facility Reviewer (*)	<u>WILLIAM S. ALTE</u> 	<u>12-21-02</u>		
3. Chief Examiner	<u>JOHN G. PARUSO</u> 	<u>1/22/03</u>		
4. NRC Supervisor	<u>Richard J. Conte</u> 	<u>1/24/03</u>		
(*) Not applicable for NRC developed examinations				

1. Pre-Examination

3-17-2003 & 3-24-2003

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 3-17-03 & 3-24-03 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)	DATENOTE
1. W. S. ALTIC	S2 INSTRUCTOR / DEVELOPER	<i>W. S. Altic</i>	11-13-02	<i>W. S. Altic</i>	3-24-02
2. STEPHEN J. DUBERT	INSTRUCTOR / REWRITER	<i>Stephen J. Dubert</i>	11/13/02	<i>Stephen J. Dubert</i>	3/24/03
3. Roy C. Spangenberg	CRS / Evaluator / Validator	<i>Roy C. Spangenberg</i>	01/06/03	<i>Roy C. Spangenberg</i>	3/24/03
4. Robert Mutton	CRS / Evaluator - Validator	<i>Robert W. Mutton</i>	1/06/03	<i>Robert W. Mutton</i>	3/24/03
5. GEORGE KELLER	CRS / EVALUATOR - VALIDATOR	<i>George Keller</i>	1-6-03	<i>George Keller</i>	3-26-03
6. Phillip Mullen	RO / VALIDATOR	<i>P. Mullen</i>	1-7-03	<i>P. Mullen</i>	3/24/03
7. MICHAEL RUH	RO / VALIDATOR	<i>Michael Ruh</i>	1-7-03	<i>Michael Ruh</i>	3/24/03
8. David Axelby	Hardware Specialist	<i>David Axelby</i>	1/9/03	<i>David Axelby</i>	3/24/03
9. ARTHUR KLEYDMAN	Software / IZ	<i>Arthur Kleydman</i>	1/9/03	<i>Arthur Kleydman</i>	3/24/03
10. ROBERT SUNESON	RO / VALIDATOR	<i>Robert Suneson</i>	1/23/03	<i>Robert Suneson</i>	3/24/03
11. Ed Goetchius	Instructor - Validator	<i>Ed Goetchius</i>	1/23/03	<i>Ed Goetchius</i>	3/24/03
12. David Wilson	Instructor - Validator	<i>David Wilson</i>	1/24/03	<i>David Wilson</i>	3/24/03
13. FRANK WILSON	SUPT OPERATIONS TRAINING	<i>Frank Wilson</i>	1/23/03	<i>Frank Wilson</i>	March 24 2003
14. George S. Liebler	CRS / Validator	<i>George S. Liebler</i>	2/11/03	<i>George S. Liebler</i>	3/24/03
15. MARK LEWIS	STA / VALIDATOR	<i>Mark Lewis</i>	2/11/03	<i>Mark Lewis</i>	3/24/03

NOTES:

1. Pre-Examination

3-17-2003 TO 3-24-2003

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 3-17/24-03. 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)	DATENOTE
1.	GARY KEENE	INSTRUCTOR	<i>[Signature]</i>	2/11/03		(1)
2.	FRANCIS MULLEN	INSTRUCTOR	<i>[Signature]</i>	2/10/03	<i>[Signature]</i>	3-27-03
3.	RICHARD BURNS	INSTRUCTOR	<i>[Signature]</i>	2/11/03	<i>[Signature]</i>	3/26/03
4.	ARI LERNER	Sim Eng	<i>[Signature]</i>	3/11/03	<i>[Signature]</i>	3/23/03
5.	AL HAYS	IT consultant	<i>[Signature]</i>	3/11/03	<i>[Signature]</i>	3/24/03
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NOTES: (1) SEE ATTACHED FACSIMILE w/ MR. KEENE'S SIGNATURE. RECEIVED BY W. ALTIC ON 3-27-03.
[Signature]

ES-201

Examination Security Agreement

Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of _____ 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 2-17/24-25. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATENOTE
1.	GARY KOENIG	INSTRUCTOR	<i>[Signature]</i>	2/11/03	<i>[Signature]</i>	
2.	PARKIS MULLEN	INSTRUCTOR	<i>[Signature]</i>	2/11/03	<i>[Signature]</i>	
3.	RICHARD BUBBS	INSTRUCTOR	<i>[Signature]</i>	2/11/03	<i>[Signature]</i>	3/26/03
4.	Ari Lerner	Sim Eng	<i>[Signature]</i>	3/11/03	<i>[Signature]</i>	3/27/03
5.	AL HAYS	IT consultant	<i>[Signature]</i>	3/11/03	<i>[Signature]</i>	3/24/03
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JPZ

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/17-3/24 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)	DATENOTE
1.	JOSEPH G. ARSENAULT	AUTHOR - CONSULTANT	<i>Joseph G. Arsenault</i>	11/4/02		(1)
2.	Jacqueline G. Schelky	Admin Technician	<i>Jacqueline G. Schelky</i>	11/27/02		(2)
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NOTES: (1) & (2) SEE ATTACHED E-MAILS FROM MR. ARSENAULT & MS. Schelky

Altic, William

From: joearsenault@nrcexam.com
Sent: Monday, March 24, 2003 5:06 PM
To: Joubert, Stephen; Altic, William
Subject: Fw: IP2 & 3 Security Agreement

Here is our Technical Assistant's e-mailed security agreement

----- Original Message -----

From: "Jacqueline Schelkly" <jschelkly@mail.com>
To: <joearsenault@nrcexam.com>
Sent: Monday, March 24, 2003 3:02 PM
Subject: IP2 & 3 Security Agreement

> To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the weeks of 3/10/2003 and 3/17/2003. From the date that I entered into this security agreement until completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these license examinations.

>
> Jacqueline Schelkly
> Western Technical Services

> --

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> Sign-up for your own FREE Personalized E-mail at Mail.com

> <http://www.mail.com/?sr=signup>

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Altic, William

From: joearsenault@nrcexam.com
Sent: Monday, March 24, 2003 9:14 AM
To: Altic, William; Joubert, Stephen; jackieschelkly@nrcexam.com
Subject: IP2/IP3 Security Agreements

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the weeks of 3/10/2003 and 3/17/2003. From the date that I entered into this security agreement until completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these license examinations.

Joseph G. Arsenault
Western Technical Services, Inc.

Facility: Indian Point Unit 2	Date of Examination: 3/17/2002	Operating Test Number: 1	
1. GENERAL CRITERIA	Initials		
	a	B*	
	C#		
a. The operating test conforms to the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).	JAS	WLS	JH
b. There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JAS	WLS	JH
c. The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	JAS	WLS	JH
d. Overlap with the written examination and between operating test categories is within acceptable limits.	JAS	WLS	JH
e. It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JAS	WLS	JH
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 	JAS	WLS	JH
b. The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	JAS	WLS	JH
c. Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and does not compromise test integrity.	JAS	WLS	JH
d. At least 20 percent of the JPMs on each test are new or significantly modified.	JAS	WLS	JH
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.	JAS	WLS	JH
Printed Name/ Signature	Date		
a. Author <u>JOSEPH G. ARSENAULT</u> <i>Joseph Arsenault</i>	<u>1/14/03</u>		
b. Facility Reviewer(*) <u>WILLIAM S. ALTI</u> <i>W.S. Alti</i>	<u>1-27-03</u>		
c. NRC Chief Examiner (#) <u>John G. Cause</u> <i>John G. Cause</i>	<u>3/6/03</u>		
d. NRC Supervisor <u>R.T. Conkle</u> <i>R.T. Conkle</i>	<u>3/8/03</u>		
(*) The facility signature is not applicable for NRC-developed tests			
#) Independent NRC reviewer initial items in column "C". Chief Examiner concurrence required.			

Facility: Indian Point Unit 2		Date of Exam: 3/17/2003		Scenario Numbers: 1 / 2 / 3		Operating Test No.: 1			
QUALITATIVE ATTRIBUTES				Initials					
				a	b	c			
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.			JBA	hsh	J			
2.	The scenarios consist mostly of related events.			JBA	hsh	JM			
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) 			JBA	hsh	J			
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.			JBA	hsh	J			
5.	The events are valid with regard to physics and thermodynamics.			JBA	hsh	J			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			JBA	hsh	J			
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.			N/A	N/A	J			
8.	The simulator modeling is not altered.			JBA	hsh	J			
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.			JBA	hsh	J			
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.			JBA	hsh	J			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			JBA	hsh	J			
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).			JBA	hsh	J			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.			JBA	hsh	J			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)				Actual Attributes					
				--	--	--			
1.	Total malfunctions (5-8)			7	6	5	JBA	hsh	J
2.	Malfunctions after EOP entry (1-2)			2	2	2	JBA	hsh	J
3.	Abnormal events (2-4)			3	3	2	JBA	hsh	J
4.	Major transients (1-2)			1	1	1	JBA	hsh	J
5.	EOPs entered/requiring substantive actions (1-2)			2	2	2	JBA	hsh	J
6.	EOP contingencies requiring substantive actions (0-2)			1	1	0	JBA	hsh	J
7.	Critical tasks (2-3)			2	2	2	JBA	hsh	J

OPERATING TEST NO.: SROU-1

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/ Component	4				
	Major	1				
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
As SRO	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0			N/A	
	Normal	1			1	
	Instrument/ Component	2			2,3	
	Major	1			4	

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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 requirement.

Author:

[Signature] W.S. ALTIC 3-6-03

Chief Examiner:

[Signature] JOHN G. CARUSO 3/6/03

OPERATING TEST NO.: SROI-1

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/ Component	4				
	Major	1				
As RO or PO	Reactivity	1			1	
	Normal	0			N/A	
	Instrument/ Component	2			2,3,5	
	Major	1			4	
SRO-I	Reactivity	0		N/A		
	Normal	1		1		
	Instrument/ Component	2		2,3,4, 7		
	Major	1		5		
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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 requirement.

Author:

W. S. Altic W. S. ALTIC 3-6-03

Chief Examiner:

John Corso John Corso 3/6/03

OPERATING TEST NO.: SROI-2

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1				
	Normal	1				
	Instrument/ Component	4				
	Major	1				
As RO or PO	Reactivity	1		1		
	Normal	0		N/A		
	Instrument/ Component	2		4,6,7		
	Major	1		5		
SRO-I	Reactivity	0			N/A	
	Normal	1			1	
	Instrument/ Component	2			2,3	
	Major	1			4	
As SRO	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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 requirement.

Author:

W.S. Altic W.S. ALTIC 3-6-03

Chief Examiner:

J. Canuso J. Canuso 3/6/03

OPERATING TEST NO.: RO-1

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1		N/A	1	
	Normal	1		1	N/A	
	Instrument/ Component	4		3,4,7	2,3,5	
	Major	1		5	4	
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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 requirement.

Author:

W.S. Altik 3-6-03

Chief Examiner:

J. Caruso 3/6/03

OPERATING TEST NO.: RO-2

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1		N/A	1	
	Normal	1		1	N/A	
	Instrument/ Component	4		3,4,7	2,3,5	
	Major	1		5	4	
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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 requirement.

Author:

W.S. Altuc 3-6-03

Chief Examiner:

John C. ... 3/6/03 John C. ...

OPERATING TEST NO.: RO-3

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO/PO	Reactivity	1		1	N/A	
	Normal	1		N/A	1	
	Instrument/ Component	4		4,6,7	2,3,6	
	Major	1		5	4	
As RO or PO	Reactivity	1				
	Normal	0				
	Instrument/ Component	2				
	Major	1				
SRO-I	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
As SRO	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				
SRO-U	Reactivity	0				
	Normal	1				
	Instrument/ Component	2				
	Major	1				

- Instructions:
- (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 - (2) Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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 requirement.

Author:

W. J. Altic W. J. ALTIC 3-6-03

Chief Examiner:

John C. ... John C. ... 3/6/03

Competencies	CRS				OTC				BOP				
	SCENARIO				SCENARIO				SCENARIO				
	1	2	3	4	1	2	3	4	1	2	3	4	
Understand and Interpret Annunciators and Alarms		2,3,4 ,5,6	2,3,4			2,4,5	2,3,5				2,3,4	3,4	
Diagnose Events and Conditions		2,4,5	2,3,4 ,5			2,4,5 ,6	2,3,4 ,5				3,4,7	3,4,6	
Understand Plant and System Response		2,3,4 ,5,6, 7	2,3,5 ,6			2,4,5 ,6	2,3,5				2,3,4 ,7	3,4,6	
Comply With and Use Procedures (1)		1-7	1-6			1,2,4 ,5,6, 7	1,2,3				2,3,4 ,7	2,3,4 ,6	
Operate Control Boards (2)		N/A	N/A			1,2,5 ,6,7	1,2,3 ,5				2,3,4 ,7	1,2,3 ,6	
Communicate and Interact With the Crew		ALL	ALL			1,2,4 ,5,6, 7	1,2,3 ,4,5				1,2,3 ,4,7	1,2,3 ,4,6	
Demonstrate Supervisory Ability (3)		ALL	ALL			N/A	N/A				N/A	N/A	
Comply With and Use Tech. Specs. (3)		2,3	2,3			N/A	N/A				N/A	N/A	

Notes:

(1) Includes Technical Specification compliance for an RO.
 (2) Optional for an SRO-U.
 (3) Only applicable to SROs.

Instructions:

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

Author: W.S. Altic 3-6-03
 Chief Examiner: J. Caruso 3/6/03

Facility: IP2		Date of Exam: 3/15/2003		Exam level: SRO		
Item Description	Initial					
	A	B*	C#			
1. Questions and answers technically accurate and applicable to the facility	VPD	WHL	JM			
2. NRC K/As referenced for all questions Facility learning objectives referenced as available	PO	WHL	JM			
3. RO/SRO Overlap is no more than 75%, and SRO questions are appropriate per Section D.2.d of ES-401	PO	WHL	JM			
4. Question selection and duplication from the last 2 NRC licensing exams appears to be consistent with a systematic sampling process	PO	WHL	JM			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies and appears appropriate): <ul style="list-style-type: none"> 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 The licensee certifies that there is no duplication; or Other (explain) 	PO	WHL	JM			
6. Bank use meets limits (no more than 75% from the bank and at least 10 new, and the rest modified); enter the actual question distribution at right	Bank	Modified	New	PO	WHL	JM
	50	14	36			
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 on the right	Memory		C/A	PO	WHL	JM
	39		61			
8. References/handouts do not give away answers	PO	WHL	JM			
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	PO	WHL	JM			
10. Question psychometric quality and format meet ES, Appendix B, guidelines	PO	WHL	JM			
11. The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet	PO	WHL	JM			
Printed Name/Signature						Date
a. Author	JOSEPH G. ARSENAULT <i>Joseph Arsenault</i>			2/28/03		
b. Facility Reviewer (*)	WILLIAM S. ALTIC <i>WHL</i>			3-6-03		
c. Chief Examiner (#)	JOHN G. CARUSO <i>John Caruso</i>			3/6/03		
d. NRC Regional Supervisor	RICHARD J. CONTE <i>Richard ConTE</i>			3/6/03		
<p>Note: * The facility reviewer's initial/signature are not applicable for NRC-developed examinations</p> <p># Independent NRC reviewer initial items in column 'c', Chief Examiner concurrence required</p>						

* POST-REVIEW

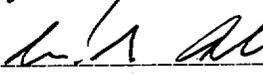
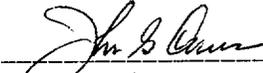
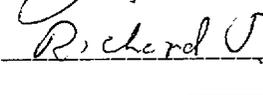
ES-401

Written Examination
Quality Checklist

Form ES-401-7

Facility: IP2		Date of Exam: 3/15/2003		Exam level: RO		
Item Description				Initial		
				A	B*	C#
1. Questions and answers technically accurate and applicable to the facility				JG	me	J
2. NRC KAs referenced for all questions Facility learning objectives referenced as available				JG	me	J
3. RO/SRO Overlap is no more than 75%, and SRO questions are appropriate per Section D.2.d of ES-401				JG	me	J
4. Question selection and duplication from the last 2 NRC licensing exams appears to be consistent with a systematic sampling process				JG	me	J
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies and appears appropriate): <ul style="list-style-type: none"> 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 The licensee certifies that there is no duplication; or Other (explain) 				JG	me	J
6. Bank use meets limits (no more than 75% from the bank and at least 10 new, and the rest modified); enter the actual question distribution at right				Bank	Modified	New
				50	18	32
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 on the right				Memory	C/A	
				47	53	
8. References/handouts do not give away answers				JG	me	J
9. Question content conforms with specific KA statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified				JG	me	J
10. Question psychometric quality and format meet ES, Appendix B, guidelines				JG	me	J
11. The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet				JG	me	J
Printed Name/Signature						Date
a. Author	JOSEPH G ARSENAULT <i>Joseph Arsenault</i>				2/28/03	
b. Facility Reviewer (*)	William ALTE <i>William Alte</i>				3-6-03	
c. Chief Examiner (#)	John CAROSO <i>John Caroso</i>				3-6-03	
d. NRC Regional Supervisor	Richard J. Conte <i>Richard Conte</i>				2/6/03	
Note:	* The facility reviewer's initial/signature are not applicable for NRC-developed examinations					
	# Independent NRC reviewer initial items in column 'c', Chief Examiner concurrence required					

Facility:	Date of Exam:	Exam Level: RO/SRO		
Item Description	Initials			
	a	b	c	
1. Clean answer sheets copied before grading	A	wh	jk	
2. Answer key changes and question deletions justified and documented	A	wh	jk	
3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	A	wh	jk	
4. Grading for all borderline cases (80% +/- 2%) reviewed in detail	A	wh	jk NA	
5. All other failing examinations checked to ensure that grades are justified	N/A	wh	jk NA	
6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	A	wh	jk	

	Printed Name / Signature	Date
a. Grader	 Bill Arbour	3/21/03
b. Facility Reviewer(*)	 Bill Altic	3-20-03
c. NRC Chief Examiner (*)	 John Capuso	4/9/03
d. NRC Supervisor (*)	 Richard J. Conte	4/10/03

(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.