

Facility: TMI UNIT #1

Date of Examination: 7/23 - 7/27/01

Examinations Developed by: Facility / NRC (circle one)

Target Date*	Task Description / Reference	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	JL
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e) <u>3/23/01</u>	JL
-120	3. Facility contact briefed on security & other requirements (C.2.c) <u>3/23/01</u>	JL
-120	4. Corporate notification letter sent (C.2.d) <u>3/29/01</u>	JL
[-90]	[5. Reference material due (C.1.e; C.3.c)] <u>N/A with EXAM #</u>	JL
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d) <u>5/8/01</u>	JL
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e) <u>5/17/01 (5/22/01)</u>	JL
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d) <u>6/4/01</u>	JL
-30	9. Preliminary license applications due (C.1.i; C.2.g; ES-202)	JL
-14	10. Final license applications due and assignment sheet prepared (C.1.i; C.2.g; ES-202) <u>7/9/01</u>	JL
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	JL
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	JL
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	JL
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	JL
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	JL
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	JL

* Target dates are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.

[] Applies only to examinations prepared by the NRC.

Facility: <u>TMI</u>		Date of Examination: <u>7/23/2001</u>		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	WGO	RSC	JL
	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.	WGO	RSC	JL
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	WGO	RSC	JL
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	WGO	RSC	JL
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.	WGO	RSC	JL
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; ensure each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s)*, and scenarios will not be repeated over successive days.	WGO	RSC	JL
	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.	WGO	RSC	JL
3. W / T	a. Verify that: (1) the outline(s) contain(s) the required number of control room and in-plant tasks, (2) no more than 30% of the test material is repeated from the last NRC examination, (3)* no tasks are duplicated from the applicants' audit test(s), and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks.	WGO	RSC	JL
	b. Verify that: (1) the tasks are distributed among the safety function groupings as specified in ES-301, (2) one task is conducted in a low-power or shutdown condition, (3) 40% of the tasks require the applicant to implement an alternate path procedure, (4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and (5) the in-plant walk-through requires the applicant to enter the RCA.	WGO	RSC	JL
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	WGO	RSC	JL
	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.	WGO	RSC	JL
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.	WGO	RSC	JL
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	WGO	RSC	JL
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	WGO	RSC	JL
	d. Check for duplication and overlap among exam sections.	WGO	RSC	JL
	e. Check the entire exam for balance of coverage.	WGO	RSC	JL
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	WGO	RSC	JL
a. Author <u>William G. Ogle, Jr.</u> Printed Name / Signature <u>[Signature]</u> Date <u>5/4/01</u> b. Facility Reviewer (*) <u>RANDY S. CAMPBELL</u> / <u>[Signature]</u> Date <u>5/7/01</u> c. NRC Chief Examiner (#) <u>JOHN G. CARWIS</u> / <u>[Signature]</u> Date <u>5/22/01</u> d. NRC Supervisor <u>RJ Conza</u> / <u>[Signature]</u> Date <u>5/22/01</u>				
Note: * Not applicable for NRC-developed examinations. # 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 7/23&30/01 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 7/23&30/01. 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. William G. Ogle Jr.	Lead Instructor/Exam Writer	<i>William G. Ogle Jr.</i>	3/16/01	<i>William G. Ogle Jr.</i>	7/27/01
2. John L. Carnoy	INSTRUCTOR / EXAM WRITER	<i>John L. Carnoy</i>	3/16/01	<i>John L. Carnoy</i>	7/27/01
3. PHILIP E. NIELSEN	NRC EXAM DEVELOPMENT COORDINATOR	<i>Philip E. Nielsen</i>	28 MAR 01	<i>Philip E. Nielsen</i>	27 JAN 2001
4. JEFFREY L. HANSEN	WR - GPS TRAINING Programs	<i>Jeffrey L. Hansen</i>	4/5/01	see attached Fax WGO	
5. RANDY S. CAMPBELL	SHIFT MANAGER / FACILITY REP.	<i>Randy S. Campbell</i>	5-2-01	Randy Campbell	8/2/01 1
6. CHARLES HUSTED	SIMULATOR ANALYST/Simulator Op.	<i>Charles Husted</i>	5/17/01	Charles Husted	8/13/01
7. JEFFREY A. FLOWERS	Control Room Operator	<i>Jeffrey A. Flowers</i>	5/23/01	Flowers per telecon	8/7/01 WGO
8. ROBIN J. LANE	EXAM WRITER	<i>Robin J. Lane</i>	5/30/01	Robin J. Lane	7/27/01
9. James A. Stubbs	Work Control Supervisor	<i>James A. Stubbs</i>	5/31/01	James A. Stubbs	8/2/01 1
10. DC Mike DeLeon	Rad Controls Op. TV	<i>DC Mike DeLeon</i>	8/1/01	DC Mike DeLeon	8/26/2001
11. Stephen K. Lent	Senior Engineer/Simulator	<i>Stephen K. Lent</i>	7/12/01	Stephen K. Lent	7/27/01
12. DW Atterholt	SOS / Observer	<i>DW Atterholt</i>	7/23/01	Atterholt per telecon	8/3/01 WGO
13. G.W. Crapice	Simulator / S. CRD	<i>G.W. Crapice</i>	7/23/01	G.W. Crapice	8/13/01 WGO
14. George Heracis	Simulator STA	<i>George Heracis</i>	7/23/01	George Heracis	7/27/01
15. William Craddock	Surrogate / Sec CRD	<i>William Craddock</i>	7/23/01	Bill Craddock	8/13/01 1

NOTES: 1. PER TELCON, RECORDED BY John L. Carnoy, *John L. Carnoy*

USE

AUG-16-2001 14:42

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ES-201

Examination Security Agreement

Form ES-201-3

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 7/23/01 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 7/23/01. 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.	<u>John P. Roberts</u>	<u>Operator Director</u>	<u>[Signature]</u>	<u>7/23/01</u>	<u>[Signature]</u>	<u>8/8/01</u>
2.	<u>GREGORY R. HOEK</u>	<u>INSTRUCTOR</u>	<u>[Signature]</u>	<u>7/23/01</u>	<u>[Signature]</u>	<u>8/1/01</u>
3.	<u>NORMAN J. MONSON</u>	<u>INSTRUCTOR III</u>	<u>[Signature]</u>	<u>7/23/01</u>	<u>[Signature]</u>	<u>7/22/01</u>
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						
13.						
14.						
15.						

NOTES:

Simulator Shift Manager

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Facility: <u>TMI</u>		Date of Examination: <u>7/23/01</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).	WGO	RSC	JA	
b. There is no day-to-day repetition between this and other operating tests to be administered during this examination.	WGO	RSC	JA	
c. The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	WGO	RSC	JA	
d. Overlap with the written examination and between operating test categories is within acceptable limits.	WGO	RSC	JA	
e. It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	WGO	RSC	JA	
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 - reasonable and 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 	WGO	RSC	JA	
b. The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	N/A WGO	N/A RSC	JA	
c. Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.	WGO	RSC	JA	
d. At least 20 percent of the JPMs on each test are new or significantly modified.	WGO	RSC	JA	
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.	WGO	RSC	JA	
Printed Name / Signature		Date		
a. Author	<u>William G. Ogle, Jr. / W.G. Ogle</u>		<u>6/1/01</u>	
b. Facility Reviewer(*)	<u>RANDY S. CAMPBELL / Randy S. Campbell</u>		<u>6/2/01</u>	
c. NRC Chief Examiner (#)	<u>JOHN CARUSO / John Caruso</u>		<u>7/12/01</u>	
d. NRC Supervisor	<u>R. J. Conte / R. J. Conte</u>		<u>7/13/01</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>TMI</i>		Date of Exam: <i>7/23/01</i>		Scenario Numbers: <i>1121A</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>WGO</i>	<i>RSC</i>	<i>JK</i>			
2.	The scenarios consist mostly of related events.	<i>WGO</i>	<i>RSC</i>	<i>JK</i>			
3.	Each event description consists of - 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>WGO</i>	<i>RSC</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>WGO</i>	<i>RSC</i>	<i>JK</i>			
5.	The events are valid with regard to physics and thermodynamics.	<i>WGO</i>	<i>RSC</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>WGO</i>	<i>RSC</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>N/A</i>			
8.	The simulator modeling is not altered.	<i>WGO</i>	<i>RSC</i>	<i>JK</i>			
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	<i>WGO</i>	<i>RSC</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.4 of ES-301.	<i>WGO</i>	<i>RSC</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>WGO</i>	<i>RSC</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>WGO</i>	<i>RSC</i>	<i>JK</i>			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<i>WGO</i>	<i>RSC</i>	<i>JK</i>			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes			-	-	-
1.	Total malfunctions (5-8)	<i>5</i>	<i>5</i>	<i>5</i>	<i>WGO</i>	<i>RSC</i>	<i>JK</i>
2.	Malfunctions after EOP entry (1-2)	<i>2</i>	<i>1</i>	<i>2</i>	<i>WGO</i>	<i>RSC</i>	<i>JK</i>
3.	Abnormal events (2-4)	<i>3</i>	<i>3</i>	<i>3</i>	<i>WGO</i>	<i>RSC</i>	<i>JK</i>
4.	Major transients (1-2)	<i>2</i>	<i>1</i>	<i>2</i>	<i>WGO</i>	<i>RSC</i>	<i>JK</i>
5.	EOPs entered/requiring substantive actions (1-2)	<i>1</i>	<i>1</i>	<i>1</i>	<i>WGO</i>	<i>RSC</i>	<i>JK</i>
6.	EOP contingencies requiring substantive actions (0-2)	<i>1</i>	<i>1</i>	<i>2</i>	<i>WGO</i>	<i>RSC</i>	<i>JK</i>
7.	Critical tasks (2-3)	<i>7</i>	<i>4</i>	<i>4</i>	<i>WGO</i>	<i>RSC</i>	<i>JK</i>

OPERATING TEST NO.:

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO	Reactivity	1				
	Normal	1				
	Instrument / Component	4				
	Major	1				
As RO	Reactivity	1	1	1	2	
	Normal	0				
	Instrument / Component	2	5	4	4	
	Major	1	2	1	2	
SRO-I	Reactivity	0				
	Normal	1	1	1	1	
	Instrument / Component	2	4	3	4	
	Major	1	2	1	2	
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:

William G. Ogle Jr. WGO

NRC Reviewer:

John Canuso JAC

SRO

RO

Competencies	Applicant #1 RO/SRO-I/SRO-U				Applicant #2 RO/SRO-I/SRO-U				Applicant #3 RO/SRO-I/SRO-U			
	SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4
Understand and Interpret Annunciators and Alarms	36	23	23		36	23	23					
Diagnose Events and Conditions	34 56	23 56	23 56		34 56	23 56	23 56					
Understand Plant and System Response	14 57	25 67	23 67		14 57	25 67	23 67					
Comply With and Use Procedures (1)	123 56 7	12 34 567	123 456		13 56 7	12 34 67	12 34 567					
Operate Control Boards (2)					123 56 7	14 26 7	12 34 567					
Communicate and Interact With the Crew	All	All	All		All	All	All					
Demonstrate Supervisory Ability (3)	123 567	12 34 57	123 456									
Comply With and Use Tech. Specs. (3)	35	34	5									
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:

William G. Oate Jr. M.E. O.G.P.

NRC Reviewer:

John G. Causel John Causel

NOTE! SCENARIO # 3 SPARE NOT USED
See attached schedule
for EXAM THAT reflects
APPLICANT ASSIGNMENTS

Facility:		Date of Exam:			Exam Level: RO/SRO			
Item Description					Initial			
					a	b*	c#	
1.	Questions and answers technically accurate and applicable to facility				WGO	RSL	JL	
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available				WGO	RSL	JL	
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401				WGO N/A	WGO N/A	*	
4.	Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process						JL	
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input checked="" type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input type="checkbox"/> the examinations were developed independently; or <input type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)				WGO	RSL	JL	
6.	Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank	Modified	New	WGO	RSL	JL	
		39	3	58				
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory		CIA	WGO	RSL	JL	
		43		57				
8.	References/handouts provided do not give away answers				WGO	RSL	JL	
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				WGO	RSL	JL	
10.	Question psychometric quality and format meet ES, Appendix B, guidelines				WGO	RSL	JL	
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet				WGO	RSL	JL	
		Printed Name / Signature					Date	
a.	Author	William G. Oyle Jr. / <i>[Signature]</i>					6/1/01	
b.	Facility Reviewer (*)	Randy S. Campbell / <i>[Signature]</i>					6-2-01	
c.	NRC Chief Examiner (#)	John G. Canuso / <i>[Signature]</i>					7-10-01	
d.	NRC Regional Supervisor	R. J. Conner / <i>[Signature]</i>					7/13/01	
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.								

Item 3 per telecom with R. Campbell. W. Oyle

Facility:	Date of Exam:	Exam Level: RO/SRO		
Item Description		Initials		
		a	b	c
1.	Clean answer sheets copied before grading	ps	WGO	JA
2.	Answer key changes and question deletions justified and documented	na ps	N/A WGO	JA JA
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	ps	WGO	JA
4.	Grading for all borderline cases (80% +/- 2%) reviewed in detail	na ps	N/A WGO	JA JA
5.	All other failing examinations checked to ensure that grades are justified	na ps	N/A WGO	JA JA
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	ps	WGO	JA
a. Grader		John L. Carney / JLC		2/1/01
b. Facility Reviewer(*)		William G. Delp Jr. / WGD		8/1/01
c. NRC Chief Examiner (*)		John Carney / JLC		8/2/01
d. NRC Supervisor (*)		R.J. Caste / RJC		2/24/02
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.				