Facility: MILLSTONE 3 Date of Examination: 4/17-21/00

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)	JTB
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	12/22/99 JTB
-120	3. Facility contact briefed on security & other requirements (C.2.c)	12/20/99 JTB
-120	4. Corporate notification letter sent (C.2.d)	12/22/99 JTB
[-90]	[5. Reference material due (C.1.e; C.3.c)]	NA JTB
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	2/4/00 JTB
-70	7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)	2/11/00 JTB
-45	8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d)	2/28/00 JTB
-30	9. Preliminary license applications due (C.1.l; C.2.g; ES-202)	3/14/00 JTB
-14	10. Final license applications due and assignment sheet prepared (C.1.l; C.2.g; ES-202) ppp assign	3/31/00 JTB 4/11/00 JTB
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	3/23/00 JTB
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	JTB 3/27/00 JTB
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	4/11/00 JTB
-7	14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204)	4/6/00 JTB
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	4/12/00 JTB
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	4/11/00 JTB

* 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: Millstone Unit 3 Date of Examination: 4/14-21/00

Item	Task Description	Initials a	Initials b*	Initials c
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	R	B	B
	b. Assess whether the outline was systematically prepared and whether all knowledge and ability categories are appropriately sampled.	R	B	B
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	R C	B	B
	d. Assess whether the repetition from previous examination outlines is excessive.	C R	B	B
2. SIM	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.	C	B	B
	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.	- C	B	B **
	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.	C	B	B
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.	C R	B	B
	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.	C R	B	B
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	C R	B	B
	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.	R C	B	B
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	R C	B	B
	* b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	C	B	B
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	C R	B	B
	d. Check for duplication and overlap among exam sections.	C	B	B
	e. Check the entire exam for balance of coverage.	C	B	B
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	C R	B	B

	Printed Name / Signature	Date
a. Author	J. William Coté / [signature] / Robert S. Royce / [signature]	1/25/00
b. Facility Reviewer(*)	Mike Baughman / [signature]	2/2/00
c. Chief Examiner	LARRY E. BRIGGS / [signature]	2/11/00
d. NRC Supervisor	Richard V. Conte / [signature]	3/23/00

(*) Not applicable for NRC-developed examinations.

* Systematically & randomly picked exam

** Schedule needs revised to balance # of scenarios for each applicant.
Schedule revised to provide balance – L Briggs 2/11/00

Facility: MP3 Millstone Unit 3 Date of Examination: APRIL 14-21/00 Operating Test Number: SRO Initial

	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).	JC	B	B
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JC	B	B
c.	The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	JC	B	B
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	JC	B	B
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JC	B	B*
	2. WALK-THROUGH (CATEGORY A & B) CRITERIA	–	–	–
a.	Each JPM includes the following, as applicable: · 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: - 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	JC	B	B
b.	The prescripted questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	JC	B	N/A B
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.	JC	B	B
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	JC	B	B
	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. ES-301-4 with original sample plan	JC	B	B

	Printed Name / Signature	Date
a. Author	Joseph W. Cote' / William Cote	2/27/00
b. Facility Reviewer(*)	Mike Bouchard /	2/27/00
c. NRC Chief Examiner (*)	LARRY E. BRIGGS / Larry E Briggs	4/10/00
d. NRC Supervisor (*)	Richard J. Conte / RJ Conte	4/11/00

(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.

* Admin portion will need some revision to improve discrimination value. L E Briggs
Revisions made. L E Briggs 4/10/00

Facility: Millstone Unit 3 Date of Examination: APRIL 14-21/00 Operating Test Number: SRO UPGrade

	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).	JC	B	B
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JC	B	B
c.	The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	JC	B	B
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	JC	B	B
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JC	B	B*
	2. WALK-THROUGH (CATEGORY A & B) CRITERIA	–	–	–
a.	Each JPM includes the following, as applicable: · 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: - 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	JC	B	B
b.	The prescripted questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	JC	B	NB
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.	JC	B	B
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	JC	B	B
	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. ES-301-4 with original sample plan	JC	B	B

	Printed Name / Signature	Date
a. Author	Joseph W. Cote / Joseph W. Cote	2/27/00
b. Facility Reviewer(*)	Mike Bracegirdle / Mike Bracegirdle	2/27/00
c. NRC Chief Examiner (*)	LARRY E. BRIGGS / Larry E. Briggs	4/10/00
d. NRC Supervisor (*)	Richard J. Conte / Richard J. Conte	4/11/00

(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.

Facility: Millstone Unit 3 Date of Examination: APRIL 14-21 /00 Operating Test Number: RO Initial

	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).	JC	B	B
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	JC	B	B
c.	The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	JC	B	B
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	JC	B	B
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	JC	B	B
	2. WALK-THROUGH (CATEGORY A & B) CRITERIA	–	–	–
a.	Each JPM includes the following, as applicable: · 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: - 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	JC	B	B
b.	The prescripted questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	JC	B	NA B
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.	JC	B	B
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	JC	B	B
	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. ES-301-4 with original sample Plan	JC	B	B

	Printed Name / Signature	Date
a. Author	Joseph W. Côté / William Côté	2/27/00
b. Facility Reviewer(*)	Mike Brockman / MB	2/27/00
c. NRC Chief Examiner (*)	LARRY E. BRIGGS / Larry E Briggs	4/10/00
d. NRC Supervisor (*)	Richard J. Conte / RJC	4/11/00

(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.

See attached 301-4 equivalent forms.
J Briggs

ES-301 Simulator Scenario Quality Checklist Form ES-301-4

Facility: Millstone Unit 3 Date of Exam: 4/30-5/100 Scenario Numbers: 1 / 2 / 3 Operating Test No.: A/B

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.	C	C	C
2.	The scenarios consist mostly of related events.	C	C	C
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)	C	C	C
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.	C	C	C
5.	The events are valid with regard to physics and thermodynamics.	C	C	C
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	C	C	C
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.	C	C	C
8.	The simulator modeling is not altered.	C	C	C
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.			
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.	C	C	C
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	C	C	C
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).	C	C	C
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	C	C	C

TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes	–	–	–
1.	Total malfunctions (5-8)	5 / 7 / 5	C	C	C
2.	Malfunctions after EOP entry (1-2)	2 / 4 / 2	C	C	C
3.	Abnormal events (2-4)	3 / 2 / 3	C	C	C
4.	Major transients (1-2)	2 / 2 / 3	C	C	C
5.	EOPs entered/requiring substantive actions (1-2)	2 / 2 / 2	C	C	C
6.	EOP contingencies requiring substantive actions (0-2)	1 / 1 / 1	C	C	C
7.	Critical tasks (2-3)	2 / 2 / 2	C	C	C

OPERATING TEST NO.:

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

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.

Author: William Cobb 1/31/00

Chief Examiner: Larry E Briggs

Facility: Millstone Unit 3 Date of Exam: 4/21/00 Scenario Numbers: 3 / 4 / Operating Test No.: D

QUALITATIVE ATTRIBUTES		Initials a	Initials b	Initials 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.	C	C	
2.	The scenarios consist mostly of related events.	C	C	
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)	C	C	
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.	C	C	
5.	The events are valid with regard to physics and thermodynamics.	C	C	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	C	C	
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.	C	C	
8.	The simulator modeling is not altered.	C	C	
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.			
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.	C	C	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	C	C	
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).	C	C	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	C	C	

TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes	–	–	–
1.	Total malfunctions (5-8)	5 / 7 /	C	C	
2.	Malfunctions after EOP entry (1-2)	2 / 3 /	C	C	
3.	Abnormal events (2-4)	3 / 2 /	C	C	
4.	Major transients (1-2)	3 / 2 /	C	C	
5.	EOPs entered/requiring substantive actions (1-2)	2 / 1 /	C	C	
6.	EOP contingencies requiring substantive actions (0-2)	1 / 0 /	C	C	
7.	Critical tasks (2-3)	2 / 3 /	C	C	

OPERATING TEST NO.:

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO	Reactivity	1	1	Ø1		
	Normal	1	0	1		
	Instrument	2	1	0		
	Component	2	3	3		
	Major	1	2	1		
As RO	Reactivity	1	1	1		
	Normal	0	0	1		-
	Instrument	1	1	0		
	Component	1	3	3		
	Major	1	2	1		
SRO-I						
As SRO	Reactivity	0	1	1		
	Normal	1	0	1		
	Instrument	1	1	0		
	Component	1	3	3		
	Major	1	2	1		
SRO-U	Reactivity	0	1	1		
	Normal	1	0	1		
	Instrument	1	1	0		
	Component	1	3	3		
	Major	1	2	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.

Author: [signature] 11/3/00

Chief Examiner: Tony E Briggs

EXTRA EXAMS (IF needed)

Facility: Millstone Unit 3 Date of Exam: 4/30-5/1/00 Scenario Numbers: 5 / 6 / Operating Test No.: E

QUALITATIVE ATTRIBUTES		Initials a	Initials b	Initials 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.	C	C	
2.	The scenarios consist mostly of related events.	C	C	
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)	C	C	
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.	C	C	
5.	The events are valid with regard to physics and thermodynamics.	C	C	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	C	C	
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.	C	C	
8.	The simulator modeling is not altered.	C	C	
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.			
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.	C	C	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	C	C	
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).	C	C	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	C	C	

TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes	–	–	–
1.	Total malfunctions (5-8)	6 / 4 /	C	C	
2.	Malfunctions after EOP entry (1-2)	3 / 1 /	C	C	
3.	Abnormal events (2-4)	2 / 3 /	C	C	
4.	Major transients (1-2)	2 / 2 /	C	C	
5.	EOPs entered/requiring substantive actions (1-2)	2 / 2 /	C	C	
6.	EOP contingencies requiring substantive actions (0-2)	0 / 0 /	C	C	
7.	Critical tasks (2-3)	3 / 1 /	C	C	

OPERATING TEST NO.:

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

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.

Author: William Cote 1/31/00

Chief Examiner: Larry E Briggs

Facility: Millstone Unit 3 Date of Exam: 4/20-21/00 Scenario Numbers: 1 / 3 / Operating Test No.: C

QUALITATIVE ATTRIBUTES		Initials a	Initials b	Initials 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.	C	C	
2.	The scenarios consist mostly of related events.	C	C	
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)	C	C	
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.	C	C	
5.	The events are valid with regard to physics and thermodynamics.	C	C	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	C	C	
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.	C	C	
8.	The simulator modeling is not altered.	C	C	
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.			
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.	C	C	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	C	C	
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).	C	C	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	C	C	

TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes	–	–	–
1.	Total malfunctions (5-8)	5 / 5 /	C	C	
2.	Malfunctions after EOP entry (1-2)	2 / 2 /	C	C	
3.	Abnormal events (2-4)	3 / 3 /	C	C	
4.	Major transients (1-2)	2 / 3 /	C	C	
5.	EOPs entered/requiring substantive actions (1-2)	2 / 2 /	C	C	
6.	EOP contingencies requiring substantive actions (0-2)	1 / 1 /	C	C	
7.	Critical tasks (2-3)	2 / 2 /	C	C	

OPERATING TEST NO.:

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

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.

Author: [signature] 1/31/00

Chief Examiner: Larry E Briggs

SECTION 3
EXAM OVERVIEW

Title: Station Blackout
ID Number: Y2K NRC-1 Revision: 0 [**NEW**]

1. Purpose:

   This category of the operating test implements item 1-8 and 11-13 identified in 10CFR55.45(a). This is the most performanced based category of the operating test and is used to evaluate the applicants ability to safely operate the plant's systems under dynamic, integrated conditions. (ES-301-B.3)

2. Exercise brief:

   The crew will take the shift with the plant at 100% power and middle of life conditions. The "B" MDAFW Pump will be out of service for routine oil change. The pump is expected back within the next 8 hrs.

   Shortly after turnover, the controlling channel of Pzr Level will fail low. Letdown will isolate and the crew will need to enter AOP3571, Instrument Failure Response, to address the instrument problem. The RO will need to restore letdown and the SRO will need to address Tech Specs.

   Once letdown restoration is commenced & tech specs addressed, the "A" SG controlling NR level channel will fail to 0% over 60 seconds. The BOP will need to diagnose a problem. Once identified, the crew will re-enter AOP 3571, Instrument Failure response to shift channels to a functioning channel.

   Upon shifting to a functional channel and restoring level to 50%, ISO New England will call requiring a 300 MWE Rapid Downpower due to a fire in a transformer on the Montville line (*recent event at MP3*). The crew will need to enter AOP-3575, Rapid Downpower, and commence ramping down power.

   Once the evaluators are satisfied with the reactivity manipulation, a failure of offsite power will occur. Both emergency diesels will fail to auto or manually start to provide emergency power to 34C/34D. The crew will exit E-0 and enter ECA-0.0 to address the complete loss of AC Power. The TDAFW Pump will have failed to auto start and will need to be manually started by the BOP **[critical task]**. Once equipment has been placed in PTL, the PEOs will be successful in starting the "B" EDG. The service water pump associated with the "B" EDG will fail to auto start requiring the RO to manually start the other service water pump in the train **[critical task]**. The crew should move ahead in ECA-0.0 and ultimately transition to ECA-0.1, Loss of All AC Recovery without SI. The scenario will terminate upon implementing ECA-0.1. The event should be classified as either an ALERT C-1 (if power was lost for <15 min) or SAE (power lost for >15 min)

3. Plant/Simulator differences that may affect the scenario are: NONE

4. Duration of Exam: 1.0 hour(s)

Lesson Title: Station Blackout

ID Number: Y2KNRC-1 Revision: 0 **[NEW]**

Assessor: J. William Côté Concurrence: _____

QUALITATIVE ATTRIBUTES

___Y__1. The scenario summary clearly states the objectives of the scenario.

___Y__2. The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the crew into expected events.

___Y__3. The scenario consists mostly of related events.

___Y__4. Each event description consists of:

- the point in the scenario when it is to be initiated
- the malfunctions(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

___Y__5. 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.

___Y__6. The events are valid with regard to physics and thermodynamics.

___Y__7. Sequencing/timing of events is reasonable, and allows for the examination team to obtain complete evaluation results commensurate with the scenario objectives.

__N/A_8. If time compression techniques are used, scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.

__Y___9. The simulator modeling is not altered.

_____10. The scenario has been validated. Any open simulator performance deficiencies have been evaluated to ensure functional fidelity is maintained while running the scenario.

___Y__11. Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered IAW Section D.4 of ES301

___Y__12. All individual operator competencies can be evaluated, as verified using form ES-301-6.

___Y__13. Each operator will be significantly involved in the minimum number of transients and events specified on Form ES-301-5. (Form submitted with simulator scenarios).

___Y__14. Level of difficulty is appropriate to support licensing decisions for each crew position.

Lesson Title: Station Blackout

ID Number: Y2KNRC-1 Revision: 0 [**NEW**]

Note: Following criteria list scenario traits that are numerical (QUANTITATIVE) in nature.

01. Total Malfunctions (TM) - Include EM's- 5 to 8 required — Total 5

Pzr level channel, SG NR Level channel, station blackout, TDAFW Pump auto start failure, Service water pump auto start failure.

02. Malf's after EOP entry (EM's)- 1 to 2 required — Total 2

TDAFW Pump auto start failure, Service water pump auto start failure.

03. Abnormal Events (AE)-2 to 4 required — Total 3

Pzr level channel, SG NR Level channel, Rapid down power

04. Major Transients (MT)-1 to 2 required — Total 2

Loss of offsite AC, Station blackout

05. EOP's (EU) entered/requiring substantive actions 1 to 2 required — Total 2

E-0, Rx Trip or Safety Injection, ECA-0.0, Loss of all AC Power

06. EOP Contingencies requiring substantive actions [ECAs/FRs](EC) 0 to 2 required — Total 1

ECA-0.0, Loss of all AC Power

07. Critical Task (CT) - 2 to 3 required — Total 2

TDAFW Pump manual start, Service Water pump man start after EDG start.

08. Approximate Scenario Run Time: 45 to 60 min. (One scenario may approach 90 minutes) — Total_60_

09. EOP run time: — Total_20_

10. Technical Specifications are exercised during the scenario. — (Y/N)__Y__

for failed instruments

SECTION 3
EXAM OVERVIEW

Title: TURBINE TRIP & LARGE BREAK LOCA
ID Number: Y2K NRC-2 Revision: 0 [**NEW**]

1. Purpose:
   This category of the operating test implements item 1-8 and 11-13 identified in 10CFR55.45(a). This is the most performanced based category of the operating test and is used to evaluate the applicants ability to safely operate the plant's systems under dynamic, integrated conditions. (ES-301-B.3)

2. Exercise brief:
   The crew will take the shift at ~27% power BOL conditions with orders maintain power while awaiting primary and secondary chemistry results. The "A" MDAFW Pump will be out of service for routine oil change. The pump is expected back within the next 8 hrs.

   Shortly after turnover a SG Steam flow instrument will fail low. The crew should take manual control of the Main Feed System and enter AOP 3571, Instrument Failure Response to address the failed instrument and select another channel for control.

   Once the feed system has stabilized, a Power Range NI will fail high. This will cause a rapid inward rod motion which can only be stopped by going to manual on Rod Control. The crew will need to enter AOP 3571, Instrument Failure Response to address the failed NI. The crew should take actions to remove the NI channel from service, trip bistables and address Tech Specs for the failed channel. They should also attempt to restore Tave.

   Prior to placing rod control back into automatic control a Turbine Trip will occur. The crew should enter AOP 3550, Turbine Trip, to address the problem. Within AOP 3550 the crew will encounter a step that says if rods are in manual and power is greater than 25 % insert rods and lower power to between 20-25% power. AOP 3550 will include a power change and associated system manipulations

   Once plant conditions have stabilized and AOP 3550 actions have slowed, the Earthquake Annunciator will alarm followed by a loss of Offsite power and a Large Break LOCA. Upon the Loss of offsite Power the "A" & "B" EDG will fail to auto start. The BOP will need to manually start the EDGs from the control room and manually close the associated output breakers **[critical task]**. The CTMT Depressurization signal will not automatically actuate the required equipment and the system will need to be manually activated by the control room team **[critical task]** as they progress through E-0, Reactor Trip or Safety Injection. Upon exiting E-0 the crew will need to address the red path on P-1 and determine that FR-P.1, Response to Imminent Pressurized Thermal Shock, does not apply. They will need to address the orange path on CTMT and implement FR-Z.1, Response to High CTMT Pressure. Upon completing the FRs the crew will transition to E-1, Loss of Reactor or Secondary Coolant. The crew should progress through E-1 and transition to ES-1.3, Transition to Cold Leg Recirculation when RWST level reaches 520,000 gallons. The scenario will end upon transition to ES-1.3

   The event should be classified as an ALERT C-1 based on Barrier Reference Table criteria.

3. Plant/Simulator differences that may affect the scenario are: NONE
4. Duration of Exam: 1.0 hour(s)

Lesson Title: TURBINE TRIP & LARGE BREAK LOCA

ID Number: Y2KNRC-2 Revision: 0 [**NEW**]

Assessor: J. William Côté Concurrence:

QUALITATIVE ATTRIBUTES

___Y__1. The scenario summary clearly states the objectives of the scenario.

___Y__2. The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the crew into expected events.

___Y__3. The scenario consists mostly of related events.

___Y__4. Each event description consists of:

- the point in the scenario when it is to be initiated
- the malfunctions(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

___Y__5. 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.

___Y__6. The events are valid with regard to physics and thermodynamics.

___Y__7. Sequencing/timing of events is reasonable, and allows for the examination team to obtain complete evaluation results commensurate with the scenario objectives.

___Y__8. If time compression techniques are used, scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.

___Y__9. The simulator modeling is not altered.

_____10. The scenario has been validated. Any open simulator performance deficiencies have been evaluated to ensure functional fidelity is maintained while running the scenario.

___Y__11. Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered IAW Section D.4 of ES301

___Y__12. All individual operator competencies can be evaluated, as verified using form ES-301-6.

___Y__13. Each operator will be significantly involved in the minimum number of transients and events specified on Form ES-301-5. (Form submitted with simulator scenarios).

___Y__14. Level of difficulty is appropriate to support licensing decisions for each crew position.

Lesson Title: TURBINE TRIP & LARGE BREAK LOCA

ID Number: Y2KNRC-2 Revision: 0 [**NEW**]

Note: Following criteria list scenario traits that are numerical (QUANTITATIVE) in nature.

01. Total Malfunctions (TM) - Include EM's- 5 to 8 required — Total 8

Steam flow transmitter, PR Channel, Turbine trip, Loss of offsite, large break LOCA, auto start failure of EDGs, auto close failure of EDG output breakers, Ctmt depressurization auto actuate failure

02. Malf's after EOP entry (EM's)- 1 to 2 required — Total 4

large break LOCA, auto start failure of EDGs with auto close failure of EDG output breakers, Ctmt depressurization auto actuate failure

03. Abnormal Events (AE)-2 to 4 required — Total 3

Steam flow transmitter, PR Channel, Turbine trip,

04. Major Transients (MT)-1 to 2 required — Total 2

Loss of offsite, large break LOCA

05. EOP's (EU) entered/requiring substantive actions 1 to 2 required — Total 2

E-0, reactor trip or Safety Injection, E-1, Loss of Reactor or Secondary Coolant, FR-Z.1, Response to High CTMT Pressure

06. EOP Contingencies requiring substantive actions [ECAs/FRs](EC) 0 to 2 required — Total 1

FR-Z.1, Response to High CTMT Pressure

07. Critical Task (CT) - 2 to 3 required — Total 2

Supply AC Power, Actuate Ctmt Depressurization System

08. Approximate Scenario Run Time: 45 to 60 min. (One scenario may approach 90 minutes) — Total_60__

09. EOP run time: — Total__30_

10. Technical Specifications are exercised during the scenario. — (Y/N)__Y__

PR channel failure

SECTION 3
EXAM OVERVIEW

Title: DROPPED ROD, LOSS OF HEAT SINK & VAPOR SPACE LEAK
ID Number: Y2K NRC-3 Revision: 0 [**NEW**]

1. Purpose:

   This category of the operating test implements item 1-8 and 11-13 identified in 10CFR55.45(a). This is the most performanced based category of the operating test and is used to evaluate the applicants ability to safely operate the plant's systems under dynamic, integrated conditions. (ES-301-B.3)

2. Exercise brief: *(This session was written with an upgrade candidate & the role player on the BOP)*

   The crew will take the shift with the plant at 100% power and middle of life conditions. The "B" MDAFW Pump will be out of service for routine oil change. The pump is expected back within the next 8 hrs.

   Shortly after turnover, a Tcold instrument will fail high. This should cause rapid inward rod motion that can only be stopped by going to "MAN" on rod control SEL Switch. The crew should enter AOP 3571, Instrument Failure Response, to address the situation. Actions should include removing the instrument from service, addressing tech specs and restoring rod control.

   As the operator attempts to restore rods to the previous position, one will drop. The crew should utilize AOP 3552, Rod Control Malfunction, to recover the dropped rod. Upon investigation, the crew will be informed that the rod cannot be recovered in less than 1 hr. The crew will then be directed by the Duty Officer to lower power to less than the Tech Spec required within the next 30 minutes. The crew should utilize AOP 3571, Rapid Downpower, to execute the downpower.

   Upon the evaluators cue, a rod control urgent failure alarm will occur and several rods will drop. The crew should respond by manually tripping reactor. Upon the reactor trip the TDAFW Pump will trip. The "A" MDAFW Pump will start and fail to deliver any water. The crew should transition to FR-H.1, Response to a Loss of Heat Sink, to address the problem. The crew will discover the discharge valve on the "A" MDAFW Pump closed and be required to open it. Once established, AFW flow will be less than 530 gpm (min required for heat sink) due to high SG Pressures. The crew will utilize the associated RNO and exit FR-H.1 based on Wide Range levels increasing and Core Exit Temperatures decreasing **[critical task]**.

   Once in ES-0.1, Rx Trip Response, a leak in the Pzr Vapor space will commence. The crew will need to identify the lowering pressure situation and determine that safety injection is required and manually actuate it **[critical task]**. The crew should return to E-0, Rx Trip or Safety Injection, and commence actions. While performing actions of E-0 the leak will increase in size requiring transition to FR-Z.1, Response to High CTMT Pressure. The goal is to test the EOP users guide and implementation of status trees. Performance of E-0 not required for credit.

   The session will terminate upon transition to FR-Z.1. The events should be classified as an ALERT-C1 based on either RCS Barrier Failure, Heat sink RED or Uncontrolled RCS Pressure drop with a rise in CTMT Pressure.

3. Plant/Simulator differences that may affect the scenario are: NONE
4. Duration of Exam: 1.2 hour(s)

Lesson Title: DROPPED ROD, LOSS OF HEAT SINK & VAPOR SPACE LEAK

ID Number: Y2KNRC-3 Revision: 0 [**NEW**]

Assessor: J. William Côté Concurrence:

QUALITATIVE ATTRIBUTES

___Y__1. The scenario summary clearly states the objectives of the scenario.

___Y__2. The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the crew into expected events.

___Y__3. The scenario consists mostly of related events.

___Y__4. Each event description consists of:

- the point in the scenario when it is to be initiated
- the malfunctions(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

___Y__5. 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.

___Y__6. The events are valid with regard to physics and thermodynamics.

___Y__7. Sequencing/timing of events is reasonable, and allows for the examination team to obtain complete evaluation results commensurate with the scenario objectives.

___Y__8. If time compression techniques are used, scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.

___Y__9. The simulator modeling is not altered.

_____10. The scenario has been validated. Any open simulator performance deficiencies have been evaluated to ensure functional fidelity is maintained while running the scenario.

___Y__11. Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered IAW Section D.4 of ES301

___Y__12. All individual operator competencies can be evaluated, as verified using form ES-301-6.

___Y__13. Each operator will be significantly involved in the minimum number of transients and events specified on Form ES-301-5. (Form submitted with simulator scenarios).

___Y__14. Level of difficulty is appropriate to support licensing decisions for each crew position.

Lesson Title: DROPPED ROD, LOSS OF HEAT SINK & VAPOR SPACE LEAK

ID Number: Y2KNRC-3 Revision: 0 [**NEW**]

Note: Following criteria list scenario traits that are numerical (QUANTITATIVE) in nature.

01. Total Malfunctions (TM) - Include EM's- 5 to 8 required — Total 5

Tcold inst. fail, dropped rod, another dropped rod requiring Rx trip, loss of heat sink, Pzr Manway leak

02. Malf's after EOP entry (EM's)- 1 to 2 required — Total 2

loss of heat sink, Pzr Manway leak

03. Abnormal Events (AE)-2 to 4 required — Total 3

Tcold inst. fail, dropped rod, another dropped rod, downpower power due to inability to recover rod

04. Major Transients (MT)-1 to 2 required — Total 3

dropped rod requiring Rx trip, loss of heat sink requiring FR-H.1, Pzr Manway leak requiring SI initiation

05. EOP's (EU) entered/requiring substantive actions 1 to 2 required — Total 2

E-0, Rx Trip or Safety Injection, Fr-H.1, Loss of Heat Sink, ES-0.1, Rx Trip Response

06. EOP Contingencies requiring substantive actions [ECAs/FRs](EC) 0 to 2 required — Total 1

Fr-H.1, Loss of Heat Sink

07. Critical Task (CT) - 2 to 3 required — Total 2

Establish AFW Flow in FR- H.1 , Manually initiate Safety Injection.

08. Approximate Scenario Run Time: 45 to 60 min. (One scenario may approach 90 minutes) — Total 70

09. EOP run time: — Total 20

10. Technical Specifications are exercised during the scenario. — (Y/N) Y

During Tcold inst. fail and during Rod recovery.

SECTION 3
EXAM OVERVIEW

Title: LOSS OF MFP, RCP SEAL FAILURE

ID Number: Y2K NRC-4 Revision: 0 **[NEW]**

1. Purpose:

This category of the operating test implements item 1-8 and 11-13 identified in 10CFR55.45(a). This is the most performanced based category of the operating test and is used to evaluate the applicants ability to safely operate the plant's systems under dynamic, integrated conditions. (ES-301-B.3)

2. Exercise brief:

The crew will take the shift at ~27% power BOL conditions with orders maintain power while awaiting primary and secondary chemistry results.

Shortly after turnover, a trip of the running MFP will occur. The crew will be able to manually start the Motor Driven MFW Pump. This should place a transient on the feed station that will take about 10 minutes to settle out.

Once the feed station appears to be under control the running CHS Pump will trip. Upon the start *(using either the associated ARP or AOP 3506, Loss of all CHS Pumps)* of the standby CHS Pump, the mechanical shock will cause the "D" RCP #1 seal to begin to degrade. The crew will initially utilize ARP for the seal leakage high alarm. The seal will degrade to a point where the ARP will instruct the crew to remove the RCP from service using AOP 3554, Stopping a RCP at Power. Once the RCP has been stopped and the #1 seal isolated the crew will need to lower power to take the plant off line. The crew will need to lower power IAW OP 3204, At Power Operations, and transition to OP3206, Plant Shutdown.

Upon evaluators cue, the #2 seal on the "D" RCP will fail and a Small Break LOCA will occur on the "D" loop. The crew will need to Manually Trip the Plant from the MB4 or MB7 Trip Switch, and manually actuate SI **[critical task]** . The AFW Pumps will not auto start upon the SI signal and will need to be manually started **[critical task]**. The crew should progress through E-0, Reactor Trip or Safety Injection, and transition to E-1, Loss of Reactor or Secondary Coolant. The session will terminate during actions of E-1 when the crew demonstrated the understanding that the transition to ES-1.2.

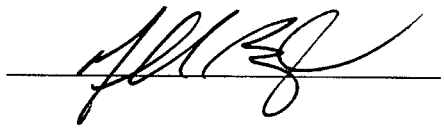
The scenario should be classified as an ALERT C-1 based on Barrier reference Table.

3. Plant/Simulator differences that may affect the scenario are: NONE

4. Duration of Exam: 1.25 hour(s)

Lesson Title: LOSS OF MFP, RCP SEAL FAILURE

ID Number: Y2KNRC-4 Revision: 0 [**NEW**]

Assessor: J. William Côté Concurrence: 

QUALITATIVE ATTRIBUTES

___Y__1. The scenario summary clearly states the objectives of the scenario.

___Y__2. The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the crew into expected events.

___Y__3. The scenario consists mostly of related events.

___Y__4. Each event description consists of:

- the point in the scenario when it is to be initiated
- the malfunctions(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

___Y__5. 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.

___Y__6. The events are valid with regard to physics and thermodynamics.

___Y__7. Sequencing/timing of events is reasonable, and allows for the examination team to obtain complete evaluation results commensurate with the scenario objectives.

___Y__8. If time compression techniques are used, scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.

___Y__9. The simulator modeling is not altered.

_____10. The scenario has been validated. Any open simulator performance deficiencies have been evaluated to ensure functional fidelity is maintained while running the scenario.

___Y__11. Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered IAW Section D.4 of ES301

___Y__12. All individual operator competencies can be evaluated, as verified using form ES-301-6.

___Y__13. Each operator will be significantly involved in the minimum number of transients and events specified on Form ES-301-5. (Form submitted with simulator scenarios).

___Y__14. Level of difficulty is appropriate to support licensing decisions for each crew position.

Lesson Title: LOSS OF MFP, RCP SEAL FAILURE

ID Number: Y2KNRC-4 Revision: 0 [**NEW**]

Note: Following criteria list scenario traits that are numerical (QUANTITATIVE) in nature.

01. Total Malfunctions (TM) - Include EM's- 5 to 8 required — Total 7

Trip of the running MFP, Trip of the running CHS Pump, RCP seal leak, complete RCP seal failure, Small Break LOCA, Auto Rx Trip failure, Auto SI initiate failure, AFW Pump auto start failure

02. Malf's after EOP entry (EM's)- 1 to 2 required — Total 3

Auto Rx Trip failure, Auto SI initiate failure, AFW Pump auto start failure

03. Abnormal Events (AE)-2 to 4 required — Total 2

Trip of the running MFP, RCP seal leak & Removal of RCP from Service

04. Major Transients (MT)-1 to 2 required — Total 2

Rx Trip due to SBLOCA, Plant SI initiation

05. EOP's (EU) entered/requiring substantive actions 1 to 2 required — Total 1

E-0, Rx Trip or Safety injection, E-1, Response to a Loss of Reactor or Secondary Coolant.

06. EOP Contingencies requiring substantive actions [ECAs/FRs](EC) 0 to 2 required — Total 0

07. Critical Task (CT) - 2 to 3 required — Total 3

Manually trip the Reactor, Manually actuate SI, Manual start of AFW Pumps

08. Approximate Scenario Run Time: 45 to 60 min. (One scenario may approach 90 minutes) — Total_60__

09. EOP run time: — Total_20_

10. Technical Specifications are exercised during the scenario. — (Y/N)__Y__

Loss of CHS Pump, Removal of RCP from service at power.

Competencies	Semancik, Jeff Applicant #1 RO/SRO-I/SRO-U				Smith, Scott Applicant #2 RO/SRO-I/SRO-U				Kelly, Brian Applicant #3 RO/SRO-I/SRO-U			
	SCENARIO				SCENARIO				SCENARIO			
	US 1	RO 2	BOP 3	4	RO 1	BOP 2	US 3	4	BOP 1	US 2	RO 3	4
Understand and Interpret Annunciators and Alarms		2			1	1			2		1	
Diagnose Events and Conditions		2			1	1			2		1	
Understand Plant and System Response		2			1	1			2		1	
Comply With and Use Procedures (1)	1				1		1			1		
Operate Control Boards (2)		2			1	1			2		1	
Communicate and Interact With the Crew	1	2			3	1	1		3	1	1	
Demonstrate Supervisory Ability (3)	1						1			1		
Comply With and Use Tech. Specs. (3)	1						1			2		

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: _____

Chief Examiner: _____

Competencies	Butler Applicant #1 ~~RO~~/SRO-I/~~SRO~~-U SCENARIO				Sadler Applicant #2 ~~RO/SRO~~-I/SRO-U SCENARIO				Lupa Applicant #3 RO/~~SRO-I/SRO-U~~ SCENARIO			
	US 1	RO 2	BOP 3	4	BOP 1	US 2	US 3	4	RO 1	BOP 2	RO 3	4
Understand and Interpret Annunciators and Alarms		2			2				1	1	1	
Diagnose Events and Conditions		2			2				1	1	1	
Understand Plant and System Response		2			2				1	1	1	
Comply With and Use Procedures (1)	1					1	1		1			
Operate Control Boards (2)		2			2				1	1	1	
Communicate and Interact With the Crew	1	2			3	1	1		3	1	1	
Demonstrate Supervisory Ability (3)	1					1	1		←	N/A		→
Comply With and Use Tech. Specs. (3)	1					2	1		←	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: William Cate

Chief Examiner: Barry E Briggs

Competencies	O'Connor Applicant #1 ~~RO~~/SRO-I/~~SRO-U~~				REED Applicant #2 ~~RO~~/SRO-I/~~SRO-U~~				Brodeur Applicant #3 ~~RO~~/SRO-I/~~SRO-U~~			
	RO SCENARIO				SCENARIO				SCENARIO			
	~~SRO~~ 1	US 2	BOP 3	4	BOP 1	RO 2	US 3	4	US 1	BOP 2	RO 3	4
Understand and Interpret Annunciators and Alarms	1				2	2				1	1	
Diagnose Events and Conditions	1				2	2				1	1	
Understand Plant and System Response	1				2	2				1	1	
Comply With and Use Procedures (1)	1	1					1		1			
Operate Control Boards (2)	1				2	2				1	1	
Communicate and Interact With the Crew	3	1			3	2	1		1	1	1	
Demonstrate Supervisory Ability (3)		1					1		1			
Comply With and Use Tech. Specs. (3)		2					1		1			

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: _____

Chief Examiner: _____

Facility: Millstone 3 | Date of Exam: 4-14-00 | Exam Level: RO/SRO

	Item Description	Initial a	Initial b*	Initial c*
1.	Questions and answers technically accurate and applicable to facility	R	B	B
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available	R	B	B
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401	R	B	B
4.	No more than 25 questions are duplicate from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right (NRC: 3; Other: 20)	R	B	B
5.	[No (Less than 5 percent) question duplication from the license screening/audit exam (if independently written)]	R	B	B
6.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right (Bank: 34; Modified: 31; New: 35)	R	B	B
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehensive/analysis level; enter the actual question distribution at right (Memory: 45; C/A: 55)	R	B	B
8.	References/handouts provided do not give away answers	R	B	B
9.	Question distribution meets previously approved examination outline; deviations are justified	R	B	B
10.	Question psychometric quality and format meet ES, Appendix B, guidelines	R	B	B
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet	R	B	B

		Printed Name / Signature	Date
a.	Author	Robert S. Royce / RSR	4-4-00
b.	Facility Reviewer(*)	Mike Broughton / MLB	4-4-00
c.	NRC Chief Examiner(*)	LARRY E. BRIGGS / Larry E. Briggs	4/10/00
d.	NRC Regional Supervisor(*)	Richard J. Conte / RJC	4/11/00

Note:
- * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required.
- # See special instructions (Section E.2.c) for Items 1, 4, 5, and 6.
- [] The items in brackets do not apply to NRC-prepared examinations.

Facility: Millstone 3 Date of Exam: 4/14/00 Exam Level: RO/SRO

Item Description					Initial a	Initial b*	Initial c*
1.	Questions and answers technically accurate and applicable to facility				R	B	B
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available				R	B	B
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401				R	B	B
4.	No more than 25 questions are duplicated from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right	NRC: 2	Other: 22		* R	B	* B
5.	[No (Less than 5 percent) question duplication from the license screening/audit exam (if independently written)]				R	B	B
6.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank: 34	Modified: 32	New: 34	R	B	B
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: 46	C/A: 54		R	B	B
8.	References/handouts provided do not give away answers				R	B	B
9.	Question distribution meets previously approved examination outline; deviations are justified				R	B	B
10.	Question psychometric quality and format meet ES, Appendix B, guidelines				R	B	B
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet				R	B	B

	Printed Name / Signature	Date
a. Author	Robert S. Royce / RS Royce	2-27-00
b. Facility Reviewer(*)	Mike Baughman / MB	2/27/00
c. NRC Chief Examiner(*)	LARRY E. BRIGGS / Larry E Briggs	3/21/00
d. NRC Regional Supervisor(*)		

Note: * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required.
See special instructions (Section E.2.c) for Items 1, 4, 5, and 6.
[ ] The items in brackets do not apply to NRC-prepared examinations.

* 95' RO NRC Exam not available when signed
** Copy provided and duplication merged as acceptable - L Briggs

Facility: Millstone 3 | Date of Exam: 4-14-00 | Exam Level: RO / (SRO)

	Item Description				Initial a	Initial b*	Initial c*
1.	Questions and answers technically accurate and applicable to facility				R	B	B
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available				R	B	B
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401				R	B	B
4.	No more than 25 questions are duplicate from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right	NRC: 4	Other: 15		R	B	B
5.	[No (Less than 5 percent) question duplication from the license screening/audit exam (if independently written)]				R	B	B
6.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank: 30	Modified: 33	New: 37	R	B	B
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehensive/analysis level; enter the actual question distribution at right	Memory: 43	C/A: 57		R	B	B
8.	References/handouts provided do not give away answers				R	B	B
9.	Question distribution meets previously approved examination outline; deviations are justified				R	B	B
10.	Question psychometric quality and format meet ES, Appendix B, guidelines				R	B	B
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet				R	B	B

		Printed Name / Signature	Date
a.	Author	Robert S. Royce / Robert Royce	4-4-00
b.	Facility Reviewer(*)	Mike Banwarth / Mike Banwarth	4/4/00
c.	NRC Chief Examiner(*)	LARRY E. BRIGGS / Larry E. Briggs	4/10/00
d.	NRC Regional Supervisor(*)	Richard J. Conte / Richard J. Conte	4/11/00

Note:
- * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required.
- # See special instructions (Section E.2.c) for Items 1, 4, 5, and 6.
- [] The items in brackets do not apply to NRC-prepared examinations.

Facility: Millstone 3 Date of Exam: 4/14/00 Exam Level: RO/SRO

Item Description					Initial a	Initial b*	Initial c*
1.	Questions and answers technically accurate and applicable to facility				R		B
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available				R		B
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401				R		B
4.	No more than 25 questions are duplicated from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right	NRC: 6	Other: 13		R		B
5.	[No (Less than 5 percent) question duplication from the license screening/audit exam (if independently written)]				R		B
6.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank: 30	Modified: 34	New: 36	R		B
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: 44	C/A: 56		R		B
8.	References/handouts provided do not give away answers				R		B
9.	Question distribution meets previously approved examination outline; deviations are justified				R		B
10.	Question psychometric quality and format meet ES, Appendix B, guidelines				R		B
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet				R		B

	Printed Name / Signature	Date
a. Author	Robert S. Royce / RM Royce	2-27-00
b. Facility Reviewer(*)	Mike Bonnichsen / M Bonnichsen	2/27/00
c. NRC Chief Examiner(*)	LARRY E. BRIGGS / Larry E Briggs	3/21/00
d. NRC Regional Supervisor(*)		

Note: * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required.
See special instructions (Section E.2.c) for Items 1, 4, 5, and 6.
[ ] The items in brackets do not apply to NRC-prepared examinations.

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

	Printed Name / Signature	Date
a. Grader	TODD H. FISH / Todd H. Fish	4/26/00
b. Facility Reviewer(*)	N/A	
c. NRC Chief Examiner (*)	LARRY E. BRIGGS / Larry E Briggs	4/26/00
d. NRC Supervisor (*)	Richard J. Conte / RJ Conte	5/1/00

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

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

	Printed Name / Signature	Date
a. Grader	John Dugan John G Dugan	4-18-00
b. Facility Reviewer(*)	Mike Baughman / Mike Baughman	4/19/00
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.

1. Pre-Examination

MP3 Y2K NRC EXAM

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4-21 APRIL 2000 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 4-21 APR 00 From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	Joseph W Côté	Senior INSTRUCTOR / Exam Writer		11/10/99		4-21-00
2.	Robert S. Royce	Senior Instructor / Exam writer		11-10-99		4-21-00
3.	Michael BRAUCHMAN	OPS TRNG MGR		11/19/99		4/24/00
4.	Jacqueline Schelky	Sr. Nuc. Dept Asst / Admin		12/13/99		4/25/00
5.	Timothy C Tallman	SOA		12/15/99		4/24/00
6.	Raymond F. Martin	Shift Mgr		1/6/00		4/24/00
7.	JOHN R. VERNOTZY	RO		1/24/00		4/24/00
8.	PAUL R. LUDINGTON	RO		2/14/00		4/24/00
9.	Dave L. Minnich	SRO MP3 Instructor		2/14/00		4/24/00
10.	Linda T. Peduzzi	NUC. Dept Assistant / Admin		2/14/00		4/25/00
11.	TRAD R. HORNER	OPS INSTRUCTOR		2/16/00		4/24/00
12.	David C Rutter	Sim Tech. (SCE)		2-14-00		4-24-00
13.	Medora E Dally	Nu Dept Asst / Admin		2-18-00		4-24-2000
14.	Michael Manolakis	Facility Admin. / Bldg Servs.		2/22/00		4/24/00
15.	William H. Sanborn III	MP2 SOA		2/22/00		4/24/2000

NOTES:

1. Pre-Examination

MP3 Y2K NRC EXAM

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 4-21 APRIL 2000 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 4-21 APR 00 From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
1.	Robert S. Iliff	Control Operator	Robert S. Iliff	2k3/00	Robert Iliff	4/24/00
2.	Huby K. Corin	Operations Assistant	H K Corin	2-23-00	H K Corin	4-24-00
3.	Robert H Riley	CONTROL OPERATOR	Robert H Riley	2-23-00	Robert H Riley	4-25-00
4.	Shari-Lea Crowley	Admin Secretary	Shari-Lea Crowley	2-24-00	Shari-Lea Crowley	4/24/00
5.	FRED NYGARD	UNIT 2 TEST DEV.	Fred Nygard	2-29-00	Fred Nygard	4/24/00
6.	CONSTANTINE VOURNAZOS	SIMULATOR COMPUTER ENGINEER	Const Vournazos	3-22-00	Const Vournazos	4/24/00
7.	William Hoffler	Shift Manager	W Hoffler	4-4-00	W Hoffler	4/24/00
8.	James W. Co	Control Operator	James W. Co	4/4/00	James W. Co	4/24/00
9.	MIKE SIEBERT	Unit Supervisor	M Siebert	4/4/00	M Siebert	4/24/00
10.	John E. DeVeau	Senior Instructor	John E DeVeau	4-17-00	John E DeVeau	4-24-00
11.	CHA-HSIANG TAN	Software Engineer	Cha-Hsiang Tan	4-17-00	Cha-Hsiang Tan	4/24/00
12.	Hsin-Cheng Gary Huang	Software Engineer	H C Huang	4-17-00	H C Huang	4/24/00
13.	BARRY PINKOWITZ	INST	B Pinkowitz	4-19-00	B Pinkowitz	4-21-00
14.	GRADY TAIT	INST	G Tait	4/19/00	G Tait	4/21/00
15.						

NOTES: