Written Exam Question Attributes

#	Bank	New	Mod	HO	Mem		#	Bank	New	Mod	HO	Mem
1	x			x			26	x			x	
2		x		x			27	x			x	
3	x			x			28		x			x
4	x			x			29		x		x	
5	x			x			30		x			x
6		x		x			31	x			x	
7	x			x			32		x			x
8		x			x		33	x				x
9	x			x			34		x		x	
10	x			x			35		x			x
11	x				x		36	x			x	
12	x			x			37		x		x	
13		x			x		38	x			x	
14	x				x		39		x			x
15		x		x			40	x			x	
16		x			x		41		x		x	
17	x			x			42	x				x
18		x		x			43		x		x	
19		x			x		44	x				x
20	x				x		45	x			x	
21		x		x			46	x			x	
22			x	x			47		x		x	
23		x			x		48	x				x
24		x		x			49	x			x	
25		x		x			50	x				x
1-25	12	12	1	17	8		26-50	14	11	0	15	10
#	Bank	New	Mod	HO	Mem		#	Bank	New	Mod	HO	Mem

Written Exam Question Attributes

#	Bank	New	Mod	HO	Mem		#	Bank	New	Mod	HO	Mem
51	x			x			76		x		x	
52		x			x		77	x			x	
53		x			x		78	x			x	
54		x		x			79	x				x
55		x			x		80		x		x	
56	x			x			81	x			x	
57	x			x			82		x		x	
58			x	x			83		x		x	
59		x			x		84	x			x	
60	x				x		85	x			x	
61	x			x			86		x		x	
62		x			x		87	x			x	
63		x		x			88		x		x	
64	x				x		89		x		x	
65	x			x			90		x		x	
66		x			x		91	x			x	
67		x		x			92	x			x	
68	x				x		93	x				x
69		x			x		94	x			x	
70		x			x		95	x				x
71		x			x		96			x	x	
72		x			x		97	x				x
73		x		x			98	x			x	
74		x			x		99	x			x	
75	x			x			100		x		x	
							SRO					
51-75	9	15	1	11	14		76-100	15	9	1	21	4
#	Bank	New	Mod	HO	Mem		#	Bank	New	Mod	HO	Mem
RO												
1-25	12	12	1	17	8							
26-50	14	11	0	15	10							
51-75	9	15	1	11	14							
Total	35	38	2	43	32							

Questions asked by candidates during the written exam

Question Number	Candidate / Proctor	Question / Reply
85	SRo1	I'm not sure what this question is asking.
	Royce	Given the conditions in the stem, what action will the procedure direct the US to take.
37	SRo2	Is this question asking what will happen after the crew takes more actions, or right after the second failure?
	Royce	Right after the second failure
50	RO1	I don't think "Auto-after-stop" is correct
	Royce	Do your best with information given
93	SRo1	Question says power is 38%. Is power still 38%?
	Royce	Yes
15	SRo4	I made a transposition error. Is this how to mark the change?
	Royce	Yes (lined out initial answer, initialed the lineout, and circled the desired answer)
24	SRo4 Ro2	Can I have steam tables for this question?
	Royce	Do your best with information given
69	SRo2	The procedure doesn't address the change, or there is a specific precaution prohibiting the change?
	Royce	The procedure doesn't address the change
73	SRo2	Is this asking what the next two procedurally directed actions are?
	Royce	Yes
98	SRo2	Does answer "C" imply other actions, such as re-latching the valve?
	Royce	"C" is saying the crew needs to start a new discharge.
77	SRo2	I want to make sure this event is happening fairly quickly; that there hasn't been a long time between the actions.
	Royce	No long delay has occurred

Questions asked by candidates during the written exam

Question Number	Candidate / Proctor	Question / Reply
13	RO 2	Is there anything wrong with inverter 1?
	Royce	There are no electrical problems with inverter 1 (Clarification provided to all candidates on white board)
68	SRO 4	Do I assume the required flowrate is an acceptance criterion?
	Royce	Yes
24	SRO 2	Can I have steam tables for question 24?
	Royce	Do your best with information given
28	SRO 1	Is this trying to tie the alarm with the system response?
	Royce	This is a two-part question: How will the system respond, and how can the RO monitor level.
81	SRO 4	Can I get a steam table?
	Royce	Do your best with information given
42	SRO 1	The question says the plant cooled down to 550°F. Can I assume it is still at 550°F?
	Royce	Yes
47	RO 2	Am I to assume initial bus voltage was 133 Volts?
	Royce	Do your best with information given
60	RO 2	When the question asks what are the immediate effects, does it mean what automatic actions occur?
	Royce	Yes
62	RO 1	Is this the control room radiation monitor?
	Royce	Yes
58	SRO 2	Is the channel failure due to a detector failure?
	Royce	Yes
74	RO 1	What does the MIDS acronym stand for?
	Royce	Moveable Incore Detector System
86	SRO 1	I'd like steam tables for this question
	Royce	Do your best with information given

Seating Chart
("HIT" Training Room, Simulator Training Building)
(Old Connecticut Yankee Simulator Room)

		Rest Room
SRO #6	SRO #4	
SRO #1	RO #2	
SRO #5	SRO #3	
SRO #2	RO #1	Door
Proctor Desk		
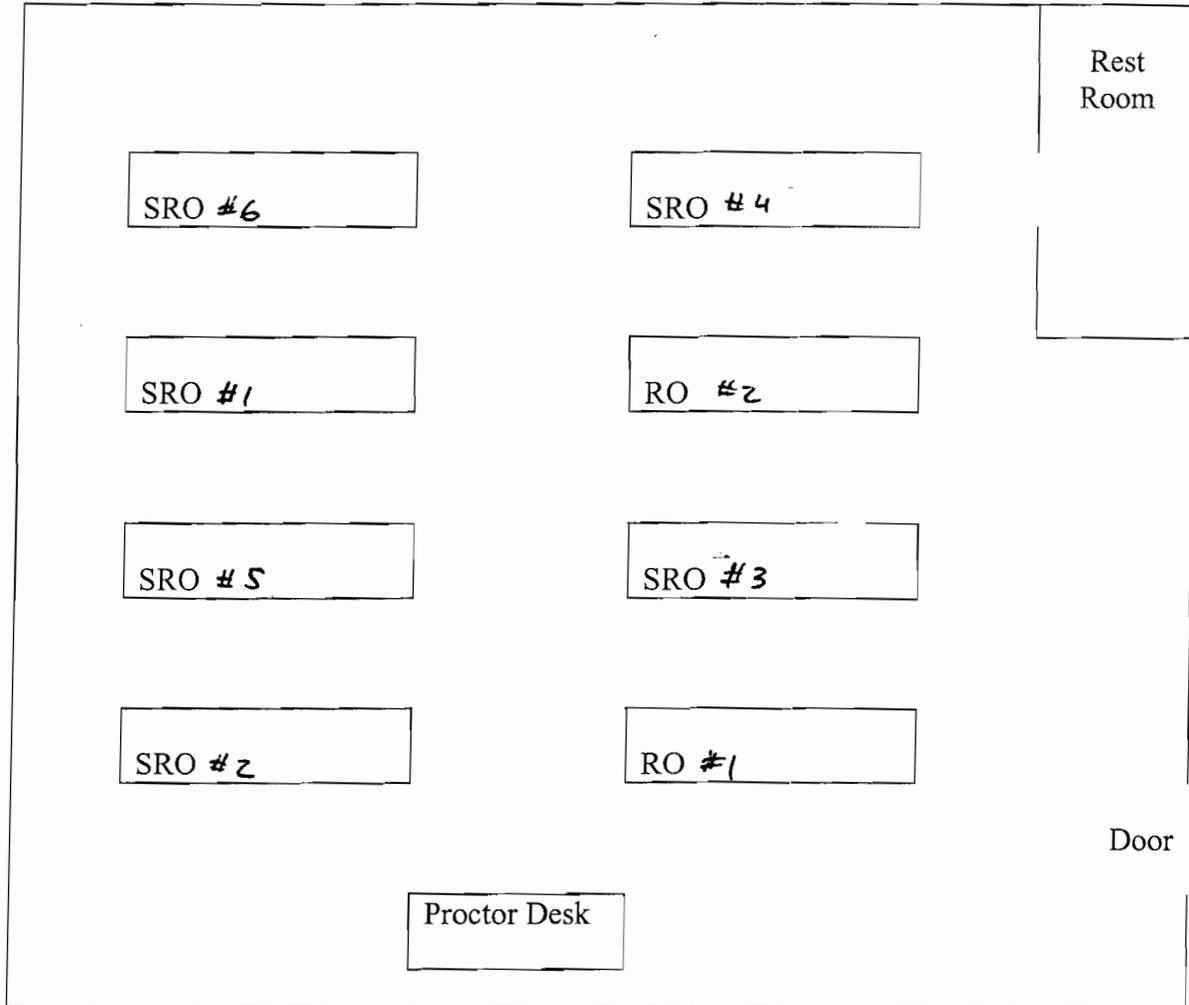
The door at the entrance was closed, and marked with a sign. A cone with a sign was placed just outside the door.

Written Exam Performance Analysis Results (See attached table)

Fifty-six questions had at least one applicant miss the question.

Of the twenty-six questions missed by more than one applicant, fourteen had more than one distractor chosen.

Five RO questions and two SRO question were missed by half or more of the applicants. They are dispositioned below:

Question 6: This question is technically accurate, but was difficult, requiring the candidates to analyze four abnormal indications for the charging pump. This was recognized as a difficult, but technically correct question during the exam validation. No changes to training material are required.

Question 18: This question is technically accurate, but was difficult, testing the effect of grid voltage changes on MVARs and Main Generator amps. It was verified that the information was covered in GFS training material. No changes to training material required.

Question 24: This question is technically accurate, but was difficult due to testing the basis of a step in a Yellow Path procedure. No changes to training material required.

Question 26: This question is technically accurate. The validators did not consider this question particularly difficult. Question tested basis for operating one RCP in E-1. The distractors included true statements that did not answer the basis for RCPs in this condition. It was verified that the training material adequately covered the topic.

Question 54: This question is technically accurate, but was difficult, requiring the candidates to determine whether an instrument air compressor could be re-started without the LOP signal being reset in the EOPs. This was recognized as a difficult, but technically correct question during the exam validation. No changes to training material are required.

Question 55: This question is technically accurate, but was difficult, testing component response during to simulated and actual inputs during slave relay testing. This was recognized as a difficult, but technically correct question during the exam validation. No changes to training material are required.

Question 86: This question is technically accurate, but was difficult, testing plant response to terminating Safety Injection in ECA-3.3 (Tube Rupture without pressure control). It also tested SI reinitiation criteria in ECA-3.3, which are not the standard SI Reinitiation criteria in the EOP network. This was recognized as a difficult, but technically correct question during the exam validation. No changes to training material are required.

Question 98: This question was difficult, testing actions required if a liquid waste discharge automatically isolates during a discharge, and sample results show no unexpected activity in the tank. The procedure allows recommencing the discharge. Candidates chose the conservative action of issuing a new discharge permit, or the actions required if the associated radiation monitor is out of service.

All 8 candidates were remediated on all of these questions by providing a handout with associated references, and discussing the question in detail during the examination review.

Millstone 3
2011 NRC RO License Exam Answer Sheet

NAME: _Exam Analysis_   DATE: _____

QUESTION	ANSWER CHOICE				QUESTION	ANSWER CHOICE			
1	●	B	C '''	D	[26]	●	B ''	C '	D '
2	●	B	C	D '	27	A	B	●	D '
3	A	●	C	D	28	A	●	C	D
4	A	B '	C	●	29	A	B	C	●
5	A	B	●	D	30	A	●	C	D
[6]	A ⊬⊬	●	C '	D	31	A	B	C	●
7	A	B	●	D	32	●	B	C	D '
8	●	B	C	D	33	A	●	C	D
9	●	B ''	C	D	34	●	B	C	D
10	A	B	C	●	35	A	B	C	●
11	A	●	C	D	36	A	●	C	D '
12	A	B	C	●	37	A '//	B	●	D
13	●	B	C '	D '	38	A	●	C	D
14	A	B	●	D	39	A '	B	●	D
15	A	B '	C '	●	40	A	B	C	●
16	●	B	C	D	41	A '	B	●	D
17	●	B	C	D	42	A	B	●	D
[18]	●	B ⊬⊬⊬	C	D	43	●	B	C '	D
19	A	B	●	D	44	A	B	●	D
20	A	B	●	D	45	A	●	C	D
21	A	B	●	D	46	●	B	C	D
22	A '	B	C	●	47	A	●	C '	D
23	A '	●	C '	D	48	A	B	C '	●
[24]	●	B '	C	D '//	49	A '	●	C	D
25	A	B	C	●	50	A	B	C	●

Sheet 1 of 2

Millstone 3
2011 NRC SRO License Exam Answer Sheet

NAME: _____   DATE: _____

QUESTION	ANSWER CHOICE				SRO QUESTION	ANSWER CHOICE			
51	A	**B**	C	D	76	A	B ǀ	C	**D**
52	A	B	**C**	D ǀ	77	A	B	C	**D**
53	A ǀǀ	B	C +2	**D**	78	A ǀǀ	**B**	C	D
[54]	A	B	C ⁙	**D**	79	A	B	C	**D**
(55)	A ǀǀǀ	**B**	C	D ǀ	80	A	**B**	C	D
56	A	B	**C**	D	81	A ǀ	B	C	**D**
57	A	B ǀ	C	**D**	82	**A**	B ⫽	C	D
58	**A**	B	C	D ǀ	83	A ǀ	B	**C**	D
59	A	B ǀ	C ǀ	**D**	84	A ǀ	B	**C**	D
60	**A**	B ⫽	C	D	85	A ǀ	**B**	C	D
61	A	**B**	C	D	[86]	**A**	B ǀ	C ǀⁱ	D ǀǀ
62	A ǀ	B	**C**	D	87	A	B	**C**	D
63	A ǀ	B	**C**	D	88	A	B	**C**	D ǀ
64	A	**B**	C	D	89	A ǀ	B	C ǀ	**D**
65	A ǀ	**B**	C	D	90	A ǀ	B	**C**	D
66	A	B	**C**	D	91	A ʟ	**B**	C	D
67	**A**	B	C	D ǀ	92	**A**	B ǀ	C ǀ	D
68	A	B ǀǀ	C	**D**	93	A ǀǀ	**B**	C	D
69	A	**B**	C ǀ	D ǀ	94	A	B	**C**	D
70	**A**	B ǀ	C ǀǀ	D	95	A	B	**C**	D
71	**A**	B	C	D	96	A ǀ	B	C	**D**
72	A	B	C	**D**	97	**A**	B	C	D
73	A	**B**	C	D	(98)	**A**	B	C ǀǀǀ	D ǀ
74	A	B ǀǀ	C	**D**	99	**A**	B ǀ	C	D
75	A	B	**C**	D	100	A ǀ	B	C	**D**

Millstone 3
2011 NRC RO License Exam Answer Sheet

NAME: _Key_   DATE: _7/18/11_

QUESTION	ANSWER CHOICE				QUESTION	ANSWER CHOICE			
1	**A**	B	C	D	26	**A**	B	C	D
2	**A**	B	C	D	27	A	B	**C**	D
3	A	**B**	C	D	28	A	**B**	C	D
4	A	B	C	**D**	29	A	B	C	**D**
5	A	B	**C**	D	30	A	**B**	C	D
6	A	**B**	C	D	31	A	B	C	**D**
7	A	B	**C**	D	32	**A**	B	C	D
8	**A**	B	C	D	33	A	**B**	C	D
9	**A**	B	C	D	34	**A**	B	C	D
10	A	B	C	**D**	35	A	B	C	**D**
11	A	**B**	C	D	36	A	**B**	C	D
12	A	B	C	**D**	37	A	B	**C**	D
13	**A**	B	C	D	38	A	**B**	C	D
14	A	B	**C**	D	39	A	B	**C**	D
15	A	B	C	**D**	40	A	B	C	**D**
16	**A**	B	C	D	41	A	B	**C**	D
17	**A**	B	C	D	42	A	B	**C**	D
18	**A**	B	C	D	43	**A**	B	C	D
19	A	B	**C**	D	44	A	B	**C**	D
20	A	B	**C**	D	45	A	**B**	C	D
21	A	B	**C**	D	46	**A**	B	C	D
22	A	B	C	**D**	47	A	**B**	C	D
23	A	**B**	C	D	48	A	B	C	**D**
24	**A**	B	C	D	49	A	**B**	C	D
25	A	B	C	**D**	50	A	B	C	**D**

Sheet 1 of 2

Millstone 3
2011 NRC SRO License Exam Answer Sheet

NAME: _Key_   DATE: _7/18/11_

QUESTION	ANSWER CHOICE				SRO QUESTION	ANSWER CHOICE			
51	A	**B**	C	D	76	A	B	C	**D**
52	A	B	**C**	D	77	A	B	C	**D**
53	A	B	C	**D**	78	A	**B**	C	D
54	A	B	C	**D**	79	A	B	C	**D**
55	A	**B**	C	D	80	A	**B**	C	D
56	A	B	**C**	D	81	A	B	C	**D**
57	A	B	C	**D**	82	**A**	B	C	D
58	**A**	B	C	D	83	A	B	**C**	D
59	A	B	C	**D**	84	A	B	**C**	D
60	**A**	B	C	D	85	A	**B**	C	D
61	A	**B**	C	D	86	**A**	B	C	D
62	A	B	**C**	D	87	A	B	**C**	D
63	A	B	**C**	D	88	A	B	**C**	D
64	A	**B**	C	D	89	A	B	C	**D**
65	A	**B**	C	D	90	A	B	**C**	D
66	A	B	**C**	D	91	A	**B**	C	D
67	**A**	B	C	D	92	**A**	B	C	D
68	A	B	C	**D**	93	A	**B**	C	D
69	A	**B**	C	D	94	A	B	**C**	D
70	**A**	B	C	D	95	A	B	**C**	D
71	**A**	B	C	D	96	A	B	C	**D**
72	A	B	C	**D**	97	**A**	B	C	D
73	A	**B**	C	D	98	**A**	B	C	D
74	A	B	C	**D**	99	**A**	B	C	D
75	A	B	**C**	D	100	A	B	C	**D**

Sheet 2 of 2