



Entergy Operations, Inc.  
1448 S.R. 333  
Russellville, AR 72802  
Tel 479-858-5000

2CAN021702

February 23, 2017

Mr. Clyde Osterholtz Chief Examiner  
U.S. Nuclear Regulatory Commission  
Region IV  
1600 East Lamar Blvd  
Arlington, TX 76011-4511

SUBJECT: Initial Examination – Completion of Post-Examination Analysis and  
transmittal of final examination materials for ANO, Unit 2 (CE)

Dear Mr. Osterholtz,

Contained in this submittal are the post-examination materials as required per NUREG 1021 Rev. 10 for the Arkansas Nuclear One Unit 2 initial license examination administered during the week of February 13, 2017 and the written exam administered on February 22, 2017. Also enclosed is a copy of the examination security agreement that has not been finalized due to the need to obtain post examination signatures.

We also request that all examination materials related to the ANO Unit 2 2017 NRC Operator License Examinations be withheld from public disclosure for a period of two and one half years from this date.

Please contact Randal Martin at 479-858-6844 if you have any questions regarding this submittal.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy L. Arnold", written in a cursive style.

Timothy L. Arnold  
Manager, Training  
Arkansas Nuclear One

Attachments  
cc w/o attachments: Licensing, ANO-DCC



2017 Unit 2 NRC Exam Analysis														
	CORRECT											% Missed		
1	D												1	
2	A					C						9%	2	
3	D												3	
4	D		A	A	A	A	A		A			64%	4	
5	C												5	
6	D												6	
7	C												7	
8	A			C								9%	8	
9	C												9	
10	C										B	9%	10	
11	D												11	
12	B												12	
13	C			A							A	18%	13	
14	C	D	D		D	D						36%	14	
15	D												15	
16	C		D						D			18%	16	
17	B					D		D				18%	17	
18	A				D							9%	18	
19	B												19	
20	A												20	
21	C												21	
22	B												22	
23	A												23	
24	B								A			9%	24	
25	A												25	
26	D												26	
27	B												27	
28	D												28	
29	A						D					9%	29	
30	D												30	
31	C												31	
32	D							C				9%	32	
33	D												33	
34	C				D		D				A	27%	34	
35	B												35	
36	D												36	
37	C							A		A		18%	37	
38	C												38	
39	A												39	
40	B												40	
41	A												41	
42	A												42	
43	B												43	
44	D										B	9%	44	
45	A												45	
46	A												46	
47	C												47	
48	A												48	
49	B												49	
50	A												50	
51	C												51	
52	C												52	
53	B												53	
54	A												54	
55	C												55	
56	B												56	
57	A					D	D	D				27%	57	
58	C		D		D						D	27%	58	
59	D												59	
60	A												60	
61	A		B						B			18%	61	
62	B												62	
63	B												63	
64	C										D	9%	64	
65	D												65	
66	B	D							D		D	27%	66	
67	A												67	
68	C												68	
69	D									C		9%	69	
70	A					C						9%	70	
71	A		B		B							18%	71	
72	D			C								9%	72	
73	C												73	
74	B												74	
75	C												75	
76	D												76	
77	C												77	
78	A												78	
79	D												79	
80	B												80	
81	C												81	
82	C												82	
83	D												83	
84	B												84	
85	C								B			33%	85	
86	B												86	
87	B												87	
88	B								A	D		67%	88	
89	C												89	
90	A												90	
91	C												91	
92	A												92	
93	D									A		33%	93	
94	D												94	
95	B												95	
96	B												96	
97	A												97	
98	B												98	
99	A												99	
100	C												100	
		97.3	92.0	94.6	92.0	92.0	93.3	96.0	94.6	96.0	96.0	93.0	94.3	Class Avg
													94.0	RO Avg
										94.7	SRO Section Avg		95.0	SRO Avg
										95.1	RO Section Avg			
														Avg
		97.3	92.0	94.7	92.0	92.0	93.3	96.0	94.7	92.0	92.0	100.0	SRO section	94.7
										97.3	97.3	90.7	RO section	94.3



# **2017 ANO-2 NRC Exam**

## **Administered February 22 2017**

Page 1 of 2

### **RO Final Written Examination Analysis**

The threshold for determination of questions to be analyzed was a percentage of 50% incorrect responses. We also analyzed other questions based on candidate feedback following the examination.

#4 7/11 total candidates incorrect (64.0%). All seven chose "A".  
The correct answer is "D".

The questions asked: From 100% Power, which of the following describes the primary reason for the automatic initiation of a SIAS during an Excess Steam Demand event? Distractor A stated: To inject a large amount of water inventory into the RCS to overcome the rapid drop in the Pressurizer level. Answer D stated: To inject a large amount of boric acid to the core to overcome the positive reactivity added due to the negative MTC to ensure adequate SDM is maintained.

From functions listed for the system, the only function associated with a steam line break causing an excess steam demand and is the primary reason for SIAS during this event that is not a loss of RCS Mass. These functions and reasons were covered with the class during the post written exam debrief. No changes to the key were made. Question was determined to be technically correct as written with no construction problems. We will be performing a training needs analysis on this question.



# 2017 ANO-2 NRC Exam

Administered February 22 2017

Page 2 of 2

## SRO Final Written Examination Analysis

#88 2/3 total candidates incorrect (67%)  
One chose "A", one chose "D". The correct answer is "B".

Discussed QID #88 during the scheduled exam review with the following responses:

Examine who chose "A" stated that he had a misconception about the guidance to reduce pressure thinking that it was only found in the LMFRP. Step 19 of the Loss of SDC procedure directs this action as well as the LMFRP.

Examine who chose "D" stated that he had a misconception about the step 19 contingency action within the Loss of SDC procedure. He thought the action to remove SDC Isolation MOV power fuse could be used in an actual high RCS pressure condition. This guidance is only used for a failed instrument to allow opening the Isolation valve.

Both agreed the question is correct as written. No changes to the key were made. Question was determined to be technically correct. We will be performing a training needs analysis on this question.