

Facility: Davis-Besse SRO

Date of Exam Weeks of 12/5 & 12/12 2011

Tier	Group	RO K/A Category Points											SRO ONLY Points															
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	TOTAL	A2	G*	TOTAL												
1. Emergency & Abnormal Plant Evolutions	1												<b>18</b>	3	3	<b>6</b>												
	2												<b>9</b>	2	2	<b>4</b>												
	Tier Totals												<b>27</b>	<b>5</b>	<b>5</b>	<b>10</b>												
2. Plant Systems	1												<b>28</b>	3	2	<b>5</b>												
	2												<b>10</b>	0	2	1	<b>3</b>											
	Tier Totals												<b>38</b>	<b>5</b>	<b>3</b>	<b>8</b>												
3. Generic Knowledge and Abilities Category				1				2				3				4				<b>10</b>				1	2	3	4	<b>7</b>
																				2	1	2	2					

Note:

1. Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, the "Tier Totals" in each K/A category shall not be less than two).
2. The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by ±1 from that specified in the table based on NRC revisions. The final RO exam must total 75 points and the SRO-only exam must total 25 points.
3. Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems/evolutions that are not included on the outline should be added. Refer to Section D.1.b of ES-401 for guidance regarding the elimination of inappropriate K/A statements.
4. Select topics from as many systems and evolutions as possible; sample every system or evolution in the group before selecting a second topic for any system or evolution.
5. Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively.
6. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
- 7.\* The generic (G) K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system. Refer to Section D.1.b of ES-401 for the applicable K/As.
8. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IRs) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G\* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note #1 does not apply). Use duplicate pages for RO and SRO-only exams.
9. For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43.

ES-401		PWR Examination Outline						Form ES-401-2	
Davis-Besse 12/2011		Emergency and Abnormal Plant Evolutions - Tier 1/Group 1(SRO)							
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	Points
000022 Loss of Reactor Coolant Makeup <b>Question 76</b>					X		AA2.04 Ability to determine and interpret the following as they apply to the Loss of Reactor Coolant Makeup: How long PZR level can be maintained within limits (CFR 43.5/ 45.13)	3.8	1
000026 Loss of Component Cooling Water (CCW) <b>Question 77</b>					X		2.2.37 Ability to determine operability and/or availability of safety related equipment. (CFR: 41.7 / 43.5 / 45.12)	4.6	1
000038 Steam Generator Tube Rupture (SGTR) <b>Question 78</b>					X		2.4.1 Knowledge of EOP entry conditions and immediate action steps. (CFR: 41.10 / 43.5 / 45.13)	4.8	1
000077 Generator Voltage and Electric Grid Disturbances <b>Question 79</b>					X		AA2.01 Ability to determine and interpret the following as they apply to Generator Voltage and Electric Grid Disturbances: Operating point on the generator capability curve (CFR: 41.5 and 43.5 / 45.5, 45.7, and 45.8)	3.6	1
BW/E05 Steam Line Rupture - Excessive Heat Transfer <b>Question 80</b>					X		EA2.2 Ability to determine and interpret the following as they apply to the (Excessive Heat Transfer): Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments. (CFR: 43.5 / 45.13)	4.0	1
BW/E10 Post-Trip Stabilization <b>Question 81</b>					X		2.2.44 Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions. (CFR: 41.5 / 43.5 / 45.12)	4.4	1
K/A Category Point Totals:	0	0	0	0	3	3		Group Point Total:	6

ES-401	PWR Examination Outline						Form ES-401-2		
Davis-Besse 12/2011	Emergency and Abnormal Plant Evolutions - Tier 1/Group 2(SRO)								
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	Points
000067 Plant Fire On Site <b>Question 82</b>						X	2.4.11 Knowledge of abnormal condition procedures. (CFR: 41.10 / 43.5 / 45.13)	4.2	1
000068 Control Room Evacuation <b>Question 83</b>					X		AA2.01 Ability to determine and interpret the following as they apply to the Control Room Evacuation: S/G level (CFR: 43.5 / 45.13)	4.3	1
076 High Reactor Coolant Activity <b>Question 84</b>					X		AA2.03 Ability to determine and interpret the following as they apply to the High Reactor Coolant Activity: RCS radioactivity level meter (CFR: 43.5 / 45.13)	3.0	1
BW/E08 LOCA Cooldown <b>Question 85</b>					X		2.2.25 Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits. (CFR: 41.5 / 41.7 / 43.2)	4.2	1
K/A Category Point Totals:	0	0	0	0	2	2		Group Point Total:	4

ES-401		PWR Examination Outline											Form ES-401-2	
Davis-Besse 12/2011		Plant Systems - Tier 2/Group 1(SRO)												
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	Points
004 Chemical and Volume Control System <b>Question 86</b>								X				A2.02 Ability to (a) predict the impacts of the following malfunctions or operations on the CVCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of PZR level (failure mode) (CFR: 41.5/ 43/5 / 45/3 / 45/5)	4.2	1
006 Emergency Core Cooling System (ECCS) <b>Question 87</b>											X	2.2.25 Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits. (CFR: 41.5 / 41.7 / 43.2)	4.2	1
013 Engineered Safety Features Actuation System (ESFAS) <b>Question 88</b>								X				A2.03 Ability to (a) predict the impacts of the following malfunctions or operations on the ESFAS; and (b) based Ability on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Rapid depressurization (CFR: 41.5 / 43.5 / 45.3 / 45.13)	4.7	1
076 Service Water System (SWS) <b>Question 89</b>											X	2.4.45 Ability to prioritize and interpret the significance of each annunciator or alarm. (CFR: 41.10 / 43.5 / 45.3 / 45.12)	4.3	1
103 Containment System <b>Question 90</b>								X				A2.02 Ability to (a) predict the impacts of the following malfunctions or operations on the containment system and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Necessary plant conditions for work in containment (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.2*	1
K/A Category Point Totals:	0	0	0	0	0	0	0	3	0	0	2	Group Point Total:	5	

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	Points
002 Reactor Coolant System (RCS) <b>Question 91</b>								X				A2.01 Ability to (a) predict the impacts of the following malfunctions or operations on the RCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of coolant inventory (CFR: 41.5 / 43.5 / 45.3 / 45.5)	4.4	1
014 Rod Position Indication System (RPIS) <b>Question 92</b>								X				A2.06 Ability to (a) predict the impacts of the following malfunctions or operations on the RPIS; and (b) based on those on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of LVDT (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.0*	1
079 Station Air System (SAS) <b>Question 93</b>											X	2.1.7 Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation. (CFR: 41.5 / 43.5 / 45.12 / 45.13)	4.4	1
K/A Category Point Totals:	0	0	0	0	0	0	0	2	0	0	1	Group Point Total:	3	

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Category	K/A#	Topic	RO		SRO Only	
			IR	#	IR	#
1. Conduct of Operations	2.1.37	Knowledge of procedures, guidelines, or limitations associated with reactivity management. (CFR: 41.1 / 43.6 / 45.6) <b>Question 94</b>			4.6	1
	2.1.42	Knowledge of new and spent fuel movement procedures. (CFR: 41.10 / 43.7 / 45.13) <b>Question 95</b>			3.4	1
	Subtotal					<b>2</b>
2. Equipment Control	2.2.19	Knowledge of maintenance work order requirements. (CFR: 41.10 / 43.5 / 45.13) <b>Question 96</b>			3.4	1
	Subtotal					<b>1</b>
3. Radiation Control	2.3.4	Knowledge of radiation exposure limits under normal or emergency conditions. (CFR: 41.12 / 43.4 / 45.10) <b>Question 97</b>			3.7	1
	2.3.15	Knowledge of radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc. (CFR: 41.12 / 43.4 / 45.9) <b>Question 98</b>			3.1	1
	Subtotal					<b>2</b>
4. Emergency Procedures/ Plan	2.4.23	Knowledge of the bases for prioritizing emergency procedure implementation during emergency operations. (CFR: 41.10 / 43.5 / 45.13) <b>Question 99</b>			4.4	1
	2.4.41	Knowledge of the emergency action level thresholds and classifications. (CFR: 41.10 / 43.5 / 45.11) <b>Question 100</b>			4.6	1
	Subtotal					<b>2</b>
Tier 3 Point Total					<b>7</b>	