

Facility: **Davis-Besse SRO**

Date of Exam **6/15 thru 6/26 2015**

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														3	3	6
	2														2	2	4
	Tier Totals														5	5	10
2. Plant Systems	1														3	2	5
	2													0	2	1	3
	Tier Totals														5	3	8
3. Generic Knowledge and Abilities Category					1	2	3	4					1	2	3	4	7
													2	2	1	2	

Note:

- 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).
- 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.
- 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.
- 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.
- 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.
- Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
- \* 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.
- 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.
- 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 Davis-Besse 6/2015		PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1(SRO)						Form ES-401-2	
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		AA2.01 Ability to determine and interpret the following as they apply to the Loss of Reactor Coolant Makeup: Whether charging line leak exists (CFR 43.5/ 45.13)	3.8	1
000025 Loss of RHR System <b>Question 77</b>						X	2.4.9 Knowledge of low power/shutdown implications in accident (e.g., loss of coolant accident or loss of residual heat removal) mitigation strategies. (CFR: 41.10 / 43.5 / 45.13)	4.2	1
000027 Pressurizer Pressure Control System (PZR PCS) Malfunction <b>Question 78</b>					X		AA2.07 Ability to determine and interpret the following as they apply to the Pressurizer Pressure Control Malfunctions: Makeup flow indication (CFR: 43.5 / 45.13)	3.1	1
000040 Steam Line Rupture <b>Question 79</b>						X	2.1.27 Knowledge of system purpose and/or function (CFR: 41.7)	4.0	1
000058 Loss of DC Power <b>Question 80</b>						X	2.2.40 Ability to apply Technical Specifications for a system. (CFR: 41.10 / 43.2 / 43.5 / 45.3)	4.7	1
BW/E10 Post-Trip Stabilization <b>Question 81</b>					X		EA2.2 Ability to determine and interpret the following as they apply to the (Post-Trip Stabilization): Adherence to appropriate procedures and operation within the limitations in the facility*s license and amendments. (CFR: 43.5, 45.13)	4.0	1
K/A Category Point Totals:	0	0	0	0	3	3		Group Point Total:	6

E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	Points
000059 Accidental Liquid Radwaste Release <b>Question 82</b>					X		AA2.03 Ability to determine and interpret the following as they apply to the Accidental Liquid Radwaste Release: Failure modes, their symptoms, and the causes of misleading indications on a radioactive-liquid monitor (CFR: 43.5 / 45.13)	3.6	1
BW/A05 Emergency Diesel Actuation <b>Question 83</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
BW/A08 Refueling Canal Level Decrease <b>Question 84</b>					X		AA2.1 Ability to determine and interpret the following as they apply to the (Refueling Canal Level Decrease): Facility conditions and selection of appropriate procedures during abnormal and emergency operations. (CFR: 43.5 / 45.13)	4.0	1
BW/E14 EOP Enclosures <b>Question 85</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)	4.7	1
K/A Category Point Totals:	0	0	0	0	2	2		Group Point Total:	4

ES-401 Davis-Besse 6/2015		PWR Examination Outline Plant Systems - Tier 2/Group 1(SRO)										Form ES-401-2		
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 (CVCS) <b>Question 86</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
005 Residual Heat Removal System (RHRS) <b>Question 87</b>								X				A2.03 Ability to (a) predict the impacts of the following malfunctions or operations on the RHRS, and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: RHR pump/motor malfunction (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.1	1
013 Engineered Safety Features Actuation System (ESFAS) <b>Question 88</b>											X	2.1.32 Ability to explain and apply system limits and precautions. (CFR: 41.10 / 43.2 / 45.12)	4.0	1
073 Process Radiation Monitoring (PRM) System <b>Question 89</b>								X				A2.02 Ability to (a) predict the impacts of the following malfunctions or operations on the PRM system; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Detector failure (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.2	1
076 Service Water System (SWS) <b>Question 90</b>								X				A2.01 Ability to (a) predict the impacts of the following malfunctions or operations on the SWS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of SWS (CFR: 41.5 / 43.5 / 45/3 / 45/13)	3.7*	1
K/A Category Point Totals:	0	0	0	0	0	0	0	3	0	0	2	Group Point Total:	5	

ES-401 Davis-Besse 6/2015		PWR Examination Outline Plant Systems - Tier 2/Group 2(SRO)										Form ES-401-2		
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
029 Containment Purge <b>Question 91</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
056 Condensate <b>Question 92</b>								X				A2.04 Ability to (a) predict the impacts of the following malfunctions or operations on the Condensate System; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of condensate pumps (CFR: 41.5 / 43.5 / 45.3 / 45.13)	2.8*	1
035 Steam Generator <b>Question 93</b>								X				A2.03 Ability to (a) predict the impacts of the following malfunctions or operations on the Steam Generator; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Pressure/level transmitter failure (CFR: 41.5 / 43.5 / 45.3 / 45.5)	3.6	1
K/A Category Point Totals:	0	0	0	0	0	0	0	2	0	0	1	Group Point Total: 3		

ES 401		Generic Knowledge and Abilities Outline (Tier 3)			Form ES-401-3	
Facility: <b>Davis-Besse SRO</b>			Date of Exam <b>6/15 thru 6/26 2015</b>			
Category	K/A#	Topic	RO		SRO Only	
			IR	#	IR	#
1. Conduct of Operations	2.1.4	Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55, etc. (CFR: 41.10 / 43.2) <b>Question 94</b>			3.8	1
	2.1.25	Ability to interpret reference materials, such as graphs, curves, tables, etc. (CFR: 41.10 / 43.5 / 45.12) <b>Question 95</b>			4.2	1
	Subtotal					<b>2</b>
2. Equipment Control	2.2.5	Knowledge of the process for making design or operating changes to the facility. (CFR: 41.10 / 43.3 / 45.13) <b>Question 96</b>			3.2	1
	2.2.18	Knowledge of the process for managing maintenance activities during shutdown operations, such as risk assessments, work prioritization, etc.(CFR: 41.10 / 43.5 / 45.13) <b>Question 97</b>			3.9	1
	Subtotal					<b>2</b>
3. Radiation Control	2.3.14	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities. (CFR: 41.12 / 43.4 / 45.10) <b>Question 98</b>			3.8	1
	Subtotal					<b>1</b>
4. Emergency Procedures/ Plan	2.4.5	Knowledge of the organization of the operating procedures network for normal, abnormal, and emergency evolutions. (CFR: 41.10 / 43.5 / 45.13) <b>Question 99</b>			4.3	1
	2.4.20	Knowledge of the operational implications of EOP warnings, cautions, and notes. (CFR: 41.10 / 43.5 / 45.13) <b>Question 100</b>			4.3	1
	Subtotal					<b>2</b>
Tier 3 Point Total					<b>7</b>	