

Facility:		VY SRO Retake		Date of Exam:		TBD												
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 & Plant Evolutions	1													20	3	4	7	
	2													7	2	1	3	
	Tier Totals													27	5	5	10	
2. Plant Systems	1													26	2	3	5	
	2													12	0	3	3	
	Tier Totals													38	5	3	8	
3. Generic Knowledge & Abilities Categories				1	2	3	4						10	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 that are not included on the outline should be added. Refer to section D.1.b of ES-401, for guidance regarding 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 KAs 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/A's
 - On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IR) 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 10CFR55.43

VY SRO Retake
 Written Examination Outline
 Emergency and Abnormal Plant Evolutions – Tier 1 Group 1

EAPE # / Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
295025 High Reactor Pressure / 3					X		EA2.02 - Ability to determine and/or interpret the following as they apply to HIGH REACTOR PRESSURE: Reactor Power	4.2	1
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4					X		AA2.03 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION : Actual core flow	3.3	2
295031 Reactor Low Water Level / 2					X		EA2.04 - Ability to determine and/or interpret the following as they apply to REACTOR LOW WATER LEVEL : Adequate core cooling	4.8	3
600000 Plant Fire On-site / 8						X	2.1.20 – Conduct of Operations: Ability to interpret and execute procedure steps	4.6	4
295016 Control Room Abandonment / 7						X	2.4.6 - Emergency Procedures / Plan: Knowledge of EOP mitigation strategies.	4.7	5
295006 SCRAM / 1						X	2.4.20 - Emergency Procedures / Plan: Knowledge of operational implications of EOP warnings, cautions, and notes.	4.3	6
295004 Partial or Total Loss of DC Pwr / 6						X	2.4.3 - Emergency Procedures / Plan: Ability to identify post-accident instrumentation.	3.9	7
K/A Category Totals:	0	0	0	0	3	4	Group Point Total:		7

**VY SRO Retake
Written Examination Outline
Emergency and Abnormal Plant Evolutions – Tier 1 Group 2**

EAPE # / Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
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295020 Inadvertent Cont. Isolation / 5 & 7					X		AA2.05 - Ability to determine and/or interpret the following as they apply to INADVERTENT CONTAINMENT ISOLATION : Reactor water level	3.6	8
295012 High Drywell Temperature / 5						X	2.4.31 - Emergency Procedures / Plan: Knowledge of annunciator alarms, indications, or response procedures.	4.1	9
500000 High CTMT Hydrogen Conc. / 5					X		EA2.03 - Ability to determine and / or interpret the following as they apply to HIGH PRIMARY CONTAINMENT HYDROGEN CONCENTRATIONS: Combustible limits for drywell	3.8	10
K/A Category Totals:	0	0	0	0	2	1	Group Point Total:	3	

VY SRO Retake
 Written Examination Outline
 Plant Systems – Tier 2 Group 1

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Imp.	Q#
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262001 AC Electrical Distribution								X					A2.10 - Ability to (a) predict the impacts of the following on the A.C. ELECTRICAL DISTRIBUTION ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Exceeding current limitations	3.4	11
215005 APRM / LPRM								X					A2.04 - Ability to (a) predict the impacts of the following on the AVERAGE POWER RANGE MONITOR/LOCAL POWER RANGE MONITOR SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions SCRAM trip signals	3.9	12
223002 PCIS/Nuclear Steam Supply Shutoff											X		2.4.18 - Emergency Procedures / Plan: Knowledge of the specific bases for EOPs.	4.0	13
212000 RPS											X		2.1.32 - Conduct of Operations: Ability to explain and apply system limits and precautions.	4.0	14
211000 SLC											X		2.4.11 - Emergency Procedures / Plan: Knowledge of abnormal condition procedures.	4.2	15
K/A Category Totals:	0	0	0	0	0	0	0	2	0	0	3	Group Point Total:		5	

VY SRO Retake
 Written Examination Outline
 Plant Systems – Tier 2 Group 2

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Imp.	Q#
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201002 RMCS								X				A2.04 - Ability to (a) predict the impacts of the following on the REACTOR MANUAL CONTROL SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Control rod block	3.1	16
234000 Fuel Handling Equipment								X				A2.02 - Ability to (a) predict the impacts of the following on FUEL HANDLING EQUIPMENT; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of refueling platform air system	3.6	17
233000 Fuel Pool Cooling/Cleanup								X				A2.01 - Ability to (a) predict the impacts of the following on the FUEL POOL COOLING AND CLEAN-UP ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: High pool level	2.9	18
K/A Category Totals:	0	0	0	0	0	0	0	3	0	0	0	Group Point Total:	3	

Facility:		VY SRO Retake		Date:			
Category	K/A #	Topic	RO		SRO-Only		
			IR	Q#	IR	Q#	
1. Conduct of Operations	2.1.37	Knowledge of procedures, guidelines, or limitations associated with reactivity management.			4.6	19	
	2.1.34	Knowledge of primary and secondary plant chemistry limits.			3.5	24	
	Subtotal					2	
2. Equipment Control	2.2.40	Ability to apply technical specifications for a system.			4.7	20	
	2.2.37	Ability to determine operability and / or availability of safety related equipment.			4.6	23	
	Subtotal					2	
3. Radiation Control	2.3.4	Knowledge of radiation exposure limits under normal or emergency conditions.			3.7	21	
	Subtotal					1	
4. Emergency Procedures / Plan	2.4.11	Knowledge of abnormal condition procedures.			4.2	22	
	2.4.35	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects.			4.0	25	
	Subtotal					2	
Tier 3 Point Total						7	

