Facility: Arkansas Nuclear One (Unit 1) Retake Exam Date of Exam: June 2017

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	2	3	3	N/A			3	4	N/A		3	18			
	2	2	1	2				1	2			1	9			
	Tier Totals	4	4	5				4	6			4	27			
2. Plant Systems	1	3	3	2	3	2	2	3	3	2	3	2	28			
	2	1	0	1	1	1	1	1	1	1	1	1	10			
	Tier Totals	4	3	3	4	3	3	4	4	3	4	3	38			
3. Generic Knowledge and Abilities Categories		1			2			3			4		10	1	2	3	4	
		3			3			2			2							

Note:
1. Ensure that at least two topics from every applicable K/A category are sampled within each tier of the ROand 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). (One Tier 3 Radiation Control K/A is allowed if the K/A is replaced by a K/A from another Tier 3 Category).
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 with justification; 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 a category 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.

G* Generic K/As

ES-401	PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (**RO** / 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	#
000007 (BW/E02&E10; CE/E02) Reactor Trip - Stabilization - Recovery / 1									
000008 Pressurizer Vapor Space Accident / 3				X			AA1. Ability to operate and / or monitor the following as they apply to the Pressurizer Vapor Space Accident: AA1.06 Control of PZR level (CFR 41.7 / 45.5 / 45.6)	3.6	1 1121 MOD
000009 Small Break LOCA / 3		X					EK2. Knowledge of the interrelations between the small break LOCA and the following: EK2.03 S/Gs (CFR 41.7 / 45.7)	3.0	2 368 Bank 2005
000011 Large Break LOCA / 3					X		EA2. Ability to determine or interpret the following as they apply to a Large Break LOCA: EA2.11 Conditions for throttling or stopping HPI (CFR 43.5 / 45.13)	3.9	3 491 Bank 2013
000015/17 RCP Malfunctions / 4	X						AK1. Knowledge of the operational implications of the following concepts as they apply to Reactor Coolant Pump Malfunctions (Loss of RC Flow): AK1.02 Consequences of an RCPS failure (CFR 41.8 / 41.10 / 45.3)	3.7	4 396 Bank 2013
000022 Loss of Rx Coolant Makeup / 2			X				AK3. Knowledge of the reasons for the following responses as they apply to the Loss of Reactor Coolant Makeup: AK3.02 Actions contained in SOPs and EOPs for RCPs, loss of makeup, loss of charging, and abnormal charging (CFR 41.5, 41.10 / 45.6 / 45.13)	3.5	5 610 Bank 2005
000025 Loss of RHR System / 4						X	2.2.42 Ability to recognize system parameters that are entry-level conditions for Technical Specifications. (CFR: 41.7 / 41.10 / 43.2 / 43.3 / 45.3)	3.9	6 1122 New
000026 Loss of Component Cooling Water / 8				X			AA1. Ability to operate and / or monitor the following as they apply to the Loss of Component Cooling Water: AA1.06 Control of flow rates to components cooled by the CCWS (CFR 41.7 / 45.5 / 45.6)	2.9	7 1123 New
000027 Pressurizer Pressure Control System Malfunction / 3		X					AK2. Knowledge of the interrelations between the Pressurizer Pressure Control Malfunctions and the following: AK2.03 Controllers and positioners (CFR 41.7 / 45.7)	2.6	8 933 New

ES-401	PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (**RO** / 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	#
000029 ATWS / 1									
000038 Steam Gen. Tube Rupture / 3									
000040 (BW/E05; CE/E05; W/E12) Steam Line Rupture - Excessive Heat Transfer / 4					X		AA2. Ability to determine and interpret the following as they apply to the Steam Line Rupture: AA2.04 Conditions requiring ESFAS initiation (CFR: 43.5 / 45.13)	4.5	9 1124 New
000054 (CE/E06) Loss of Main Feedwater / 4					**X**		AA2. Ability to determine and interpret the following as they apply to the Loss of Main Feedwater (MFW): AA2.01 Occurrence of reactor and/or turbine trip. (CFR 41.7 / 43.5 / 45.13)	4.3	10 623 Bank 2005
000055 Station Blackout / 6	X						EK1. Knowledge of the operational implications of the following concepts as they apply to the Station Blackout : EK1.02 Natural circulation cooling (CFR 41.8 / 41.10 / 45.3)	4.1	11 1125 MOD
000056 Loss of Off-site Power / 6						X	2.4.4 Ability to recognize abnormal indications for system operating parameters that are entry-level conditions for emergency and abnormal operating procedures. (CFR: 41.10 / 43.2 / 45.6)	4.5	12 1145 New
000057 Loss of Vital AC Inst. Bus / 6				X			AA1. Ability to operate and / or monitor the following as they apply to the Loss of Vital AC Instrument Bus: AA1.05 Backup instrument indications. (CFR 41.7 / 45.5 / 45.6)	3.5	13 1163 New
000058 Loss of DC Power / 6					X		AA2. Ability to determine and interpret the following as they apply to the Loss of DC Power: AA2.03 DC loads lost; impact on ability to operate and monitor plant systems (CFR 43.5 / 45.13)	3.5	14 1156 New
000062 Loss of Nuclear Svc Water / 4			X				AK3. Knowledge of the reasons for the following responses as they apply to the Loss of Nuclear Service Water: AK3.02 The automatic actions (alignments) within the nuclear service water resulting from the actuation of the ESFAS (CFR 41.4, 41.8 / 45.7)	3.6	15 947 Bank 2013
000065 Loss of Instrument Air / 8			X				AK3. Knowledge of the reasons for the following responses as they apply to the Loss of Instrument Air: AK3.03 Knowing effects on plant operation of isolating certain equipment from instrument air (CFR 41.5, 41.10 / 45.6 / 45.13)	2.9	16 108 MOD
W/E04 LOCA Outside Containment / 3									

ES-401	PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (**RO** / 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	#
W/E11 Loss of Emergency Coolant Recirc. / 4									
BW/E04; W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4		X					EK2. Knowledge of the interrelations between the (Inadequate Heat Transfer) and the following: EK2.1 Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features. (CFR: 41.7 / 45.7)	3.8	17 514 Bank
000077 Generator Voltage and Electric Grid Disturbances / 6						X	2.1.25 Ability to interpret reference materials, such as graphs, curves, tables, etc. (CFR: 41.10 / 43.5 / 45.12)	3.9	18 1126 New
K/A Category Totals:	2	3	3	3	4	3	**Group Point Total:**		**18**

ES-401 PWR Examination Outline Form ES-401-2
Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (**RO** / SRO)

E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G *	K/A Topic(s)	IR	#
000001 Continuous Rod Withdrawal / 1					X		AA2. Ability to determine and interpret the following as they apply to the Continuous Rod Withdrawal : AA2.03 Proper actions to be taken if automatic safety functions have not taken place (CFR: 43.5 / 45.13)	4.5	19 397 Bank 2001
000003 Dropped Control Rod / 1			X				AK3. Knowledge of the reasons for the following responses as they apply to the Dropped Control Rod: AK3.04 Actions contained in EOP for a dropped control rod. (CFR: 41.5, 41.10 / 45.6 / 45.13)	3.8	20 1127 New
000005 Inoperable/Stuck Control Rod / 1									
000024 Emergency Boration / 1									
000028 Pressurizer Level Malfunction / 2									
000032 Loss of Source Range NI / 7									
000033 Loss of Intermediate Range NI / 7	X						AK1. Knowledge of the operational implications of the following concepts as they apply to Loss of Intermediate Range Nuclear Instrumentation: AK1.01 Effects of voltage changes on performance (CFR: 41.8 / 41.10 / 45.3)	2.7	21 1128 New
000036 (BW/A08) Fuel Handling Accident / 8									
000037 Steam Generator Tube Leak / 3									
000051 Loss of Condenser Vacuum / 4									
000059 Accidental Liquid Radwaste Rel. / 9									
000060 Accidental Gaseous Radwaste Rel. / 9									
000061 ARM System Alarms / 7									
000067 Plant Fire On-site / 8									
000068 (BW/A06) Control Room Evac. / 8									
000069 (W/E14) Loss of CTMT Integrity / 5									
000074 (W/E06&E07) Inad. Core Cooling / 4									
000076 High Reactor Coolant Activity / 9									
W/EO1 & E02 Rediagnosis & SI Termination / 3									
W/E13 Steam Generator Over-pressure / 4									
W/E15 Containment Flooding / 5									
W/E16 High Containment Radiation / 9									

ES-401	PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (**RO** / 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	#
BW/A01 Plant Runback / 1		X					AK2. Knowledge of the interrelations between the (Plant Runback) and the following: AK2.1 Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features. (CFR: 41.7 / 45.7)	3.7	22 1129 MOD
BW/A02&A03 Loss of NNI-X/Y / 7				X			AA1. Ability to operate and / or monitor the following as they apply to the (Loss of NNI-X) AA1.1 Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features. (CFR: 41.7 / 45.5 / 45.6)	4.0	23 20 Bank 2007
BW/A04 Turbine Trip / 4						X	2.1.27 Knowledge of system purpose and/or function. (CFR: 41.7)	3.9	24 26 Bank 1998
BW/A05 Emergency Diesel Actuation / 6									
BW/A07 Flooding / 8					X		AA2. Ability to determine and interpret the following as they apply to the (Flooding) AA2.2 Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments. (CFR: 43.5 / 45.13)	3.3	25 780 Bank 2010
BW/E03 Inadequate Subcooling Margin / 4									
BW/E08; W/E03 LOCA Cooldown - Depress. / 4			X				EK3. Knowledge of the reasons for the following responses as they apply to the (LOCA Cooldown): EK3.2 Normal, abnormal and emergency operating procedures associated with (LOCA Cooldown). (CFR: 41.5 / 41.10, 45.6, 45.13)	3.0	26 1147 New
BW/E09; CE/A13; W/E09&E10 Natural Circ. / 4									
BW/E13&E14 EOP Rules and Enclosures	X						EK1. Knowledge of the operational implications of the following concepts as they apply to the (EOP Rules) EK1.3 Annunciators and conditions, indicating signals, and remedial actions associated with the (EOP Rules). (CFR: 41.8 / 41.10 / 45.3)	3.0	27 348 Bank 2008
CE/A11; W/E08 RCS Overcooling - PTS / 4									
CE/A16 Excess RCS Leakage / 2									
CE/E09 Functional Recovery									
K/A Category Point Totals:	**2**	**1**	**2**	**1**	**2**	**1**	**Group Point Total:**		**9**

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 1 (**RO** / 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	#
003 Reactor Coolant Pump					X							Knowledge of the operational implications of the following concepts as they apply to the RCPS: K5.04 Effects of RCP shutdown on secondary parameters, such as steam pressure, steam flow, and feed flow (CFR: 41.5 / 45.7)	3.2	28 1148 New
003 Reactor Coolant Pump				X								Knowledge of RCPS design feature(s) and/or interlock(s) which provide for the following : K4.02 Prevention of cold water accidents or transients (CFR: 41.7)	2.5	29 1146 New
004 Chemical and Volume Control						X						Knowledge of the effect of a loss or malfunction on the following CVCS components: K6.17 Flow paths for emergency boration (CFR: 41.7 / 45.7)	4.4	30 417 Bank 2002
005 Residual Heat Removal			X									Knowledge of the effect that a loss or malfunction of the RHRS will have on the following: K3.01 RCS (CFR: 41.7 / 45.6)	3.9	31 700 Mod
006 Emergency Core Cooling							X					Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the ECCS controls including: A1.13 Accumulator pressure (level, boron concentration) (CFR: 41.5 / 45.5)	3.5	32 1130 Mod
007 Pressurizer Relief/Quench Tank									X			Ability to monitor automatic operation of the PRTS, including: A3.01 Components which discharge to the PRT (CFR: 41.7 / 45.5)	2.7	33 904 New
008 Component Cooling Water								X				Ability to (a) predict the impacts of the following malfunctions or operations on the CCWS, and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.02 High/low surge tank level (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.2	34 1132 New

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 1 (**RO** / 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	#
008 Component Cooling Water		X										Knowledge of bus power supplies to the following: K2.02 CCW pump, including emergency backup (CFR: 41.7)	3.0	35 562 Bank 2011
010 Pressurizer Pressure Control									X			A3. Ability to monitor automatic operation of the PZR PCS, including: A3.02 PZR pressure (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.6	36 1149 Mod
012 Reactor Protection						**X**						K6. Knowledge of the effect of a loss or malfunction of the following will have on the RPS: K6.03 Trip logic circuits (CFR: 41.7 / 45.7)	3.1	37 307 Bank 2005
013 Engineered Safety Features Actuation											X	013 Engineered Safety Features Actuation System (ESFAS) 2.2.39 Knowledge of less than or equal to one hour Technical Specification action statements for systems.	3.9	38 1131 Mod
013 Engineered Safety Features Actuation										X		Ability to manually operate and/or monitor in the control room: A4.01 ESFAS-initiated equipment which fails to actuate (CFR: 41.7 / 45.5 to 45.8)	4.5	39 618 New
022 Containment Cooling	X											Knowledge of the physical connections and/or cause-effect relationships between the CCS and the following systems: K1.01 SWS/cooling system (CFR: 41.2 to 41.9 / 45.7 to 45.8)	3.5	40 256 Bank 2011
025 Ice Condenser														
026 Containment Spray		X										Knowledge of bus power supplies to the following: K2.02 MOVs (CFR: 41.7)	2.7	41 705 Bank 2008
039 Main and Reheat Steam					X							Knowledge of the operational implications of the following concepts as they apply to the MRSS: K5.08 Effect of steam removal on reactivity (CFR: 41.5 / 45.7)	3.6	42 1155 New

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 1 (**RO** / 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	#
039 Main and Reheat Steam				X								Knowledge of MRSS design feature(s) and/or interlock(s) which provide for the following: (CFR: 41.7) K4.05 Automatic isolation of steam line	3.7	43 656 Bank 2007
059 Main Feedwater								X				Ability to (a) predict the impacts of the following malfunctions or operations on the MFW; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.03 Overfeeding event (CFR: 41.5 / 43.5 / 45.3 / 45.13)	2.7	44 904 New
061 Auxiliary/Emergency Feedwater							X					Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the AFW controls including: A1.05 AFW flow/motor amps (CFR: 41.5 / 45.5)	3.6	45 709 Bank 2008
062 AC Electrical Distribution			X									Knowledge of the effect that a loss or malfunction of the ac distribution system will have on the following: K3.03 DC system (CFR: 41.7 / 45.6)	3.7	46 1133 New
063 DC Electrical Distribution				X								Knowledge of DC electrical system design feature(s) and/or interlock(s) which provide for the following: K4.01 Manual/automatic transfers of control (CFR: 41.7)	2.7	47 336 Bank 2007
063 DC Electrical Distribution											X	063 DC Electrical Distribution 2.2.42 Ability to recognize system parameters that are entry-level conditions for Technical Specifications.. (CFR: 41.7 / 41.10 / 43.2 / 43.3 / 45.3)	3.9	48 712 Bank 2008
064 Emergency Diesel Generator										X		Ability to manually operate and/or monitor in the control room: A4.03 Synchroscope (CFR: 41.7 / 45.5 to 45.8)	3.2	49 1150 New
073 Process Radiation Monitoring	X											Knowledge of the physical connections and/or cause effect relationships between the PRM system and the following systems: K1.01 Those systems served by PRMs (CFR: 41.2 to 41.9 / 45.7 to 45.8)	3.6	50 136 Bank 2004

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 1 (**RO** / 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	#
073 Process Radiation Monitoring							X					Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the PRM system controls including: A1.01 Radiation levels (CFR: 41.5 / 45.7)	3.2	51 978 Bank 2013
076 Service Water										X		Ability to manually operate and/or monitor in the control room: A4.02 SWS valves (CFR: 41.7 / 45.5 to 45.8)	2.6	52 46 Bank 2011
076 Service Water		X										Knowledge of bus power supplies to the following: K2.08 ESF-actuated MOVs (CFR: 41.7)	3.1	53 534 Mod
078 Instrument Air	X											K1 Knowledge of the physical connections and/or cause-effect relationships between the IAS and the following systems: K1.05 MSIV air (CFR: 41.2 to 41.9 / 45.7 to 45.8)	3.4	54 988 Bank 2013
103 Containment								X				A2. 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 A2 03 Phase A and B isolation (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.5	55 867 Bank 2013
K/A Category Point Totals:	**3**	**3**	**2**	**3**	**2**	**2**	**3**	**3**	**2**	**3**	**2**	**Group Point Total:**		**28**

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 2 (**RO** / 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	#
001 Control Rod Drive	X											Knowledge of the physical connections and/or cause effect relationships between the CRDS and the following systems: K1.09 CCWS must be cut in before energizing CRDS (CFR: 41.2 to 41.9 / 45.7 to 45.8)	2.8	56 1134 New
002 Reactor Coolant			X									Knowledge of the effect that a loss or malfunction of the RCS will have on the following: K3.02 Fuel (CFR: 41.7)	4.2	57 1135 New
011 Pressurizer Level Control														
014 Rod Position Indication					X							Knowledge of the operational implications of the following concepts as they apply to the RPIS: K5.02 RPIS independent of demand position (CFR: 41.5 / 45.7)	2.8	58 1136 New
015 Nuclear Instrumentation							X					A1. Ability to predict and/or monitor changes in parameters to prevent exceeding design limits associated with operating the NIS controls including: A1.02 SUR (CFR: 41.5 / 45.5)	3.5	59 464 Bank 2011
016 Non-Nuclear Instrumentation									X			Ability to monitor automatic operation of the NNIS, including: A3.01 Automatic selection of NNIS inputs to control systems (CFR: 41.7 / 45.5)	2.9	60 1137 MOD
017 In-Core Temperature Monitor														
027 Containment Iodine Removal														
028 Hydrogen Recombiner and Purge Control														
029 Containment Purge											X	2.4.46 Ability to verify that the alarms are consistent with the plant conditions. (CFR: 41.10 / 43.5 / 45.3 / 45.12)	4.2	61 1138 New
033 Spent Fuel Pool Cooling														
034 Fuel Handling Equipment														
035 Steam Generator														

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	#
041 Steam Dump/Turbine Bypass Control										X		Ability to manually operate and/or monitor in the control room: A4.08 Steam dump valves (CFR: 41.7 / 45.5 to 45.8)	3.0	62 296 Bank 1999
045 Main Turbine Generator														
055 Condenser Air Removal														
056 Condensate														
068 Liquid Radwaste								X				Ability to (a) predict the impacts of the following malfunctions or operations on the Liquid Radwaste System ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.04 Failure of automatic isolation (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.3	63 1139 New
071 Waste Gas Disposal														
072 Area Radiation Monitoring														
075 Circulating Water														
079 Station Air				X								Knowledge of SAS design feature(s) and/or interlock(s) which provide for the following: K4.01 Cross-connect with IAS (CFR: 41.7)	2.9	64 1140 New
086 Fire Protection						X						Knowledge of the effect of a loss or malfunction of the following will have on the Fire Protection System: K6.04 Fire, smoke, and heat detectors (CFR: 41.7 / 45.7)	2.6	65 619 Bank 2005
K/A Category Point Totals:	**1**	**0**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**Group Point Total:**		**10**

Facility: Arkansas Nuclear One (Unit 1) Retake Exam Date of Exam: June 2017

Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
1. Conduct of Operations	2.1.3	Knowledge of shift or short-term relief turnover practices. (CFR: 41.10 / 45.13)	3.7	66 1141 New		
	2.1.29	Knowledge of how to conduct system lineups, such as valves, breakers, switches, etc. (CFR: 41.10 / 45.1 / 45.12)	4.1	67 1141 New		
	2.1.37	Knowledge of procedures, guidelines, or limitations associated with reactivity management. (CFR: 41.1 / 43.6 / 45.6)	4.3	68 1084 Repeat 2016		
	Subtotal		3			
2. Equipment Control	2.2.6	Knowledge of the process for making changes to procedures. CFR: 41.10 / 43.3 / 45.13)	3.0	69 1082 Repeat 2016		
	2.2.22	Knowledge of limiting conditions for operations and safety limits. (CFR: 41.5 / 43.2 / 45.2)	4.0	70 1161 New		
	2.2.35	Ability to determine Technical Specification Mode of Operation (CFR: 41.7 / 41.10 / 43.2 / 45.13)	3.6	71 458 Bank 2011		
	Subtotal		3			
3. Radiation Control	2.3.12	Knowledge of radiological safety principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc. (CFR: 41.12 / 45.9 / 45.10)	3.2	72 1081 Repeat 2016		
	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)	3.4	73 1144 New		
	Subtotal		2			
4. Emergency Procedures / Plan	2.4.29	Knowledge of the emergency plan. (CFR: 43.5 / 45.11)	2.6	74 128 Bank 2005		
	2.4.16	Knowledge of EOP implementation hierarchy and coordination with other support procedures or guidelines such as, operating procedures, abnormal operating procedures, and severe accident management guidelines. (CFR: 41.10 / 43.5 / 45.13)	3.5	75 1143 New		

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Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
	Subtotal		2			
Tier 3 Point Total			**10**			

Tier / Group	Randomly Selected K/A	Reason for Rejection
RO T1/G1 054 AK1.02 (3.6)	054 AA2.01 (4.3)	This K/A concerns the effects of feedwater introduction on a dry S/G. ANO-1 does not have any guidance on feeding a dry S/G following a loss of MFW event. ANO-1's only guidance on feeding a dry S/G is if MFW is used to feed a S/G with an unisolable steam leak (not a MFW leak). The only remaining K/A (AK1.01) does not appear to lead to development of a discriminating question without the question being overly complicated. Replaced with AA2.01.
RO T1/G1 057 AA1.06 (3.5)	057 AA1.05 (3.2)	This K/A concerns manual control of components for which automatic control is lost. A loss of AC instrument power at ANO-1 results in 1 of 2 conditions: 1) SASS has automatically transferred control to the alternate instrument, or 2) the component has failed due to loss of power and no manual control is available. Thus a question could not be developed for this K/A. Replaced with AA1.05 which concerns use of backup instrument indications.
RO T1/G1 077 2.4.2 (4.5)	077 2.1.25 (3.9)	This K/A concerns the knowledge of setpoints associated with EOP entry conditions. This system is also on the SRO exam and development of a question about setpoints could compromise the SRO question. Replaced with K/A 2.1.25 concerning the use of graphs which has an importance rating of 3.9.
RO T1/G2 003 AK3.09 (3.0)	003 AK3.04 (3.8)	This K/A concerns the recording of group bank position for dropped rod to be used as a reference point used to withdraw dropped rod to equal height with other rods in the bank. Although a dropped rod will be leveled to be equal to the other rods in it's group, ANO-1 does not record the group position therefore a question could not be developed for this K/A. Replaced with K/A AK 3.04. The question developed for this K/A meets the intent of the original K/A.
RO T2/G1 005 K3.07 (3.2)	005 K3.01 (3.9)	This K/A concerns the effect of a loss of RHR on refueling operations. This is essentially a duplicate of SRO T2/G1 034 K1.02 which is the cause-effect relationship between fuel handling and RHR. Replaced with K/A K3.01 which concerns the loss of RHR effect on the RCS.
RO T2/G1 063 2.1.25 (3.9)	063 2.2.42 (3.9)	This K/A concerns the ability to interpret reference materials. There are no such references used with the DC electrical distribution system at ANO-1. Replaced with K/A 2.2.42 which concerns the ability to recognize system parameters that are entry-level conditions for Technical Specifications.
RO T2/G1 064 A4.10 (3.3)	064 A4.03 (3.2)	This K/A concerns the Emergency Diesel Generator and the ability to manually shed loads on a safeguards bus. A question could not be developed for this K/A without either implausible distractors or two correct answers. Replaced with K/A A4.03, ability to monitor the synchroscope.

Tier / Group	Randomly Selected K/A	Reason for Rejection
RO T2/G2 041 A4.06 (2.9)	 041 A4.08 (3.0)	This K/A concerns the atmospheric relief valve controllers which, at ANO-1, are controlled by EFIC, not the Turbine Bypass Valve (Steam Dump) control system which is part of ICS. Replaced with A4.08 "Steam dump valves" which meets the intent of the original K/A.
RO T3 2.4.4 (4.5)	 2.4.29 (3.1)	This K/A is the ability to recognize entry level conditions for emergency and abnormal operating procedures. A question could not be developed for this K/A that was not also a system type question. Replaced with K/A 2.4.29, knowledge of the emergency plan.

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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				N/A					N/A				3	3	6
	2													2	2	4
	Tier Totals													5	5	10
2. Plant Systems	1													2	3	5
	2													1	2	3
	Tier Totals													4	4	8
3. Generic Knowledge and Abilities Categories		1			2			3			4			1	2	3	4	7
														2	2	1	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). (One Tier 3 Radiation Control K/A is allowed if the K/A is replaced by a K/A from another Tier 3 Category).
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 with justification; 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 a category 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.

G* Generic K/As

ES-401 PWR Examination Outline Form ES-401-2
Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO / **SRO**)

E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G*	K/A Topic(s)	IR	#
000007 (BW/E02&E10; CE/E02) Reactor Trip - Stabilization - Recovery / 1									
000008 Pressurizer Vapor Space Accident / 3									
000009 Small Break LOCA / 3									
000011 Large Break LOCA / 3									
000015/17 RCP Malfunctions / 4									
000022 Loss of Rx Coolant Makeup / 2					X		AA2. Ability to determine and interpret the following as they apply to the Loss of Reactor Coolant Makeup: AA2.01 Whether charging line leak exists. (CFR 43.5/ 45.13)	3.8	76 1119 New
000025 Loss of RHR System / 4									
000026 Loss of Component Cooling Water / 8									
000027 Pressurizer Pressure Control System Malfunction / 3						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	77 1165 New
000029 ATWS / 1									
000038 Steam Gen. Tube Rupture / 3									
000040 (BW/E05; CE/E05; W/E12) Steam Line Rupture - Excessive Heat Transfer / 4					X		AA2. Ability to determine and interpret the following as they apply to the Steam Line Rupture: AA2.03 Difference between steam line rupture and LOCA (CFR 43.5 / 45.13)	4.7	78 1112 New
000054 (CE/E06) Loss of Main Feedwater / 4									
000055 Station Blackout / 6									
000056 Loss of Off-site Power / 6									
000057 Loss of Vital AC Inst. Bus / 6									
000058 Loss of DC Power / 6						X	2.2.37 Ability to determine the operability and/or availability of safety related equipment. (CFR: 41.7 / 43.5 / 45.12)	4.6	79 840 Bank
000062 Loss of Nuclear Svc Water / 4									
000065 Loss of Instrument Air / 8					X		AA2. Ability to determine and interpret the following as they apply to the Loss of Instrument Air: AA2.05 When to commence plant shutdown if instrument air pressure is decreasing. (CFR 43.5 / 45.13)	**4.1**	80 1114 New
~~W/E04 LOCA Outside Containment / 3~~									

ES-401	PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO / **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	#
~~W/E11 Loss of Emergency Coolant Recirc. / 4~~									
BW/E04; W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4									
000077 Generator Voltage and Electric Grid Disturbances / 6						X	2.4.11 Knowledge of abnormal condition procedures. (CFR: 41.10 / 43.5 / 45.13)	4.2	81 1166 MOD
K/A Category Totals:					**3**	**3**	**Group Point Total:**		**6**

ES-401	PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO / **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	#
000001 Continuous Rod Withdrawal / 1									
000003 Dropped Control Rod / 1									
000005 Inoperable/Stuck Control Rod / 1									
000024 Emergency Boration / 1									
000028 Pressurizer Level Malfunction / 2									
000032 Loss of Source Range NI / 7									
000033 Loss of Intermediate Range NI / 7									
000036 (BW/A08) Fuel Handling Accident / 8					X		AA2. Ability to determine and interpret the following as they apply to the Fuel Handling Incidents: AA2.03 Magnitude of potential radioactive release (CFR: 43.5 / 45.13)	4.2	82 1115 New
000037 Steam Generator Tube Leak / 3									
000051 Loss of Condenser Vacuum / 4									
000059 Accidental Liquid Radwaste Rel. / 9									
000060 Accidental Gaseous Radwaste Rel. / 9									
000061 ARM System Alarms / 7									
000067 Plant Fire On-site / 8									
000068 (BW/A06) Control Room Evac. / 8						X	2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation. (CFR: 41.10 / 43.5 / 45.2 / 45.6)	4.4	83 1116 New
~~000069 (W/E14) Loss of CTMT Integrity / 5~~									
~~000074 (W/E06&E07) Inad. Core Cooling / 4~~									
000076 High Reactor Coolant Activity / 9									
~~W/E01 & E02 Rediagnosis & SI Termination / 3~~									
~~W/E13 Steam Generator Over-pressure / 4~~									
~~W/E15 Containment Flooding / 5~~									
~~W/E16 High Containment Radiation / 9~~									
BW/A01 Plant Runback / 1									
BW/A02&A03 Loss of NNI-X/Y / 7									
BW/A04 Turbine Trip / 4									
BW/A05 Emergency Diesel Actuation / 6									
BW/A07 Flooding / 8									
BW/E03 Inadequate Subcooling Margin / 4									

ES-401	PWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO / **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	#
BW/E08; W/E03 LOCA Cooldown - Depress. / 4						X	2.4.41 Knowledge of the emergency action level thresholds and classifications. (CFR: 41.10 / 43.5 / 45.11)	4.6	84 1167 New
BW/E09; CE/A13; W/E09&E10 Natural Circ. / 4					X		EA2. Ability to determine and interpret the following as they apply to the (Natural Circulation Cooldown) EA2.1 Facility conditions and selection of appropriate procedures during abnormal and emergency operations. (CFR: 43.5 / 45.13)	4.2	85 1118 New
BW/E13&E14 EOP Rules and Enclosures									
~~CE/A11; W/E08 RCS Overcooling - PTS / 4~~									
~~CE/A16 Excess RCS Leakage / 2~~									
~~CE/E09 Functional Recovery~~									
K/A Category Point Totals:					**2**	**2**	**Group Point Total:**		**4**

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 1 (RO / **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	#
003 Reactor Coolant Pump System (RCPS)											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	86 809 Bank 2010
004 Chemical and Volume Control														
005 Residual Heat Removal								X				A2. 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: A2.02 Pressure transient protection during cold shutdown (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.7	87 594 MOD
006 Emergency Core Cooling											X	2.2.12 Knowledge of surveillance procedures. (CFR: 41.10 / 45.13)	4.1	88 1009 Bank 2013
007 Pressurizer Relief/Quench Tank														
008 Component Cooling Water														
010 Pressurizer Pressure Control														
012 Reactor Protection														
013 Engineered Safety Features Actuation											X	2.4.6 Knowledge of EOP mitigation strategies. (CFR: 41.10 / 43.5 / 45.13)	4.7	89 1117 New
022 Containment Cooling														
~~025 Ice Condenser~~														
026 Containment Spray								X				A2. Ability to (a) predict the impacts of the following malfunctions or operations on the CSS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.07 Loss of containment spray pump suction when in recirculation mode, possibly caused by clogged sump screen, pump inlet high temperature exceeded cavitation, voiding), or sump level below cutoff (interlock) limit (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.9	90 1152 New
039 Main and Reheat Steam														
059 Main Feedwater														

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 1 (RO / **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	#
061 Auxiliary/Emergency Feedwater														
062 AC Electrical Distribution														
063 DC Electrical Distribution														
064 Emergency Diesel Generator														
073 Process Radiation Monitoring														
076 Service Water														
078 Instrument Air														
103 Containment														
K/A Category Point Totals:								**2**			**3**	**Group Point Total:**		**5**

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 2 (RO / **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	#
001 Control Rod Drive														
002 Reactor Coolant														
011 Pressurizer Level Control														
014 Rod Position Indication								X				A2. 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: A2.03 Dropped rod (CFR: 41.5 / 43.5 / 45.3 / 45.13)	4.1	91 1154 Bank 2011
015 Nuclear Instrumentation														
016 Non-Nuclear Instrumentation														
017 In-Core Temperature Monitor														
027 Containment Iodine Removal														
028 Hydrogen Recombiner and Purge Control														
029 Containment Purge														
033 Spent Fuel Pool Cooling														
034 Fuel Handling Equipment											X	2.1.32 Ability to explain and apply system limits and precautions (CFR: 41.10 / 43.2 / 45.12)	4.0	92 1041 Direct
035 Steam Generator														
041 Steam Dump/Turbine Bypass Control														
045 Main Turbine Generator														
055 Condenser Air Removal														
056 Condensate														
068 Liquid Radwaste														
071 Waste Gas Disposal														
072 Area Radiation Monitoring														
075 Circulating Water														
079 Station Air														
086 Fire Protection											X	2.2.40 Ability to apply Technical Specifications for a system. (CFR: 41.10 / 43.2 / 43.5 / 45.3)	4.7	93 1110 New
K/A Category Point Totals:	**1**							**1**			**1**	**Group Point Total:**		**3**

Facility: **ANO, Unit 1** Date of Exam: **June 2017**

Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
1. Conduct of Operations	2.1.	2.1.37 Knowledge of procedures, guidelines, or limitations associated with reactivity management. (CFR: 41.1 / 43.6 / 45.6)			4.6	94 1109 New
	2.1.	2.1.34 Knowledge of primary and secondary plant chemistry limits. (CFR: 41.10 / 43.5 / 45.12)			3.5	95 1157 New
	Subtotal					2
2. Equipment Control	2.2.	2.2.7 Knowledge of the process for conducting special or infrequent tests. (CFR: 41.10 / 43.3 / 45.13)			3.6	96 1158 New
	2.2.	2.2.14 Knowledge of the process for controlling equipment configuration or status. (CFR: 41.10 / 43.3 / 45.13)			4.3	97 1107 New
	Subtotal					2
3. Radiation Control	2.3.	2.3.12 Knowledge of radiological safety principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc. (CFR: 41.12 / 45.9 / 45.10)			3.7	98 1168 MOD
	Subtotal					1
4. Emergency Procedures / Plan	2.4.	2.4.28 Knowledge of procedures relating to a security event (non-safeguards information). (CFR: 41.10 / 43.5 / 45.13)			4.1	99 1160 New
	2.4.	2.4.44 Knowledge of emergency plan protective action recommendations. (CFR: 41.10 / 41.12 / 43.5 / 45.11)			4.4	100 1162 New
	Subtotal					2
Tier 3 Point Total						**7**

Tier / Group (Original)	Randomly Selected K/A (New)	Reason for Rejection
SRO T1/G1 022 AA2.02 (3.7)	(Q#76) 022 AA2.01 (3.8)	022 – Loss of Reactor Coolant Makeup. Original K/A concerns charging pump problems but was not able to develop a discriminating SRO-only question since charging pump problems are diagnosed with RO level knowledge. Replaced with K/A AA2.01 which entails diagnosing whether charging line leaks exist.
SRO T1/G1 027 G2.2.36 (4.2)	(Q#77) 027 G2.2.25 (4.2)	027 – PPCS Malfunction. Original K/A concerns the effect of maintenance on the associated LCO. Spent an excessive amount of time and validations but was not able to develop an SRO only discriminating question. Replaced with K/A 2.2.25 that concerns knowledge of bases in Tech Specs for LCOs and safety limits.
SRO T1/G1 058 G2.4.47 (4.2)	(Q#79) 058 G2.2. 37 (4.6)	058 – Loss of DC Power. Original K/A concerns ability to diagnose and recognize trends using control room reference material. This K/A does not lend itself lead to an SRO level question due to a lack of reference material other than the loss of DC power AOP. Replaced with K/A 2.2.37 that concerns availability of safety related equipment.
SRO T1/G1 065 AA2.08 (3.3)	(Q#80) 065 AA2.05 (4.1)	065 – Loss of Instrument Air. Original K/A concerns failure modes of air-operated equipment. This K/A does not lend itself to an SRO-only question since it involves mere system knowledge. Replaced with K/A AA2.05 that concerns when to commence plant shutdown if instrument air pressure is decreasing.
SRO T2/G1 006 A2.13 (4.2)	(Q#88) 006 G2.2.12 (4.1)	006 – Emergency Core Cooling System (ECCS). Original K/A concerns inadvertent SIS actuations. This K/A does not lend itself to an SRO-only question since there is only one procedure for an inadvertent ESAS actuation (1203.053), which has no transitions to other procedures except the Reactor Trip EOP. Replaced with generic K/A 2.2.12 relates to the knowledge of Surveillance procedures.

Tier / Group (Original)	Randomly Selected K/A (New)	Reason for Rejection
SRO T2/G1 026 A2.08 (3.7)	(Q#90) 026 A2.07 (3.9)	026 – CS System (CSS). Original KA concerns safe securing of containment spray. But was not able to develop as SRO-only question since setpoints and conditions are diagnosed at the RO knowledge level. Replaced with K/A A2.07 which entails Loss of CS pumps suction when in recirculation mode.
SRO T2/G2 034 K1.02 (3.2)	(Q#92) 034 2.1.32 (4.0)	034 - Original K/A concerns physical connection between the Fuel Handling System and RHRS. An SRO only question could not be developed for this K/A without it being a systems question. Replaced with 2.1.32 that concerns ability to explain and apply limits and precautions.
SRO T2/G2 034 2.1.32 (4.0)	(Q#93) 034 2.2.40 (4.7)	086 – Original K/A concerned the ability to explain and apply system limits and precautions. An SRO only question could not be developed for this K/A since an RO should be able to explain any limit and precaution in the normal operating procedure. Replaced with 2.2.40 which concerns the ability to apply Technical Specifications.
SRO T3 2.4.9 (4.2)	(Q#99) 2.4.28 (4.1)	Original K/A concerns low power/shutdown implications in accident mitigation strategies. An SRO only question could not be developed for this K/A without it being a systems question. Replaced with 2.4.28 that concerns knowledge of procedures related to a security event (non-safeguards info).
SRO T3 2.4.18 (4.0)	(Q#100) 2.4.44 (4.4)	Original K/A concerns knowledge of the specific bases for EOPs. An SRO-only question could not be developed for this question which was not also RO knowledge or was system based. Replaced with 2.4.44 that concerns knowledge of emergency plan protective action recommendations.