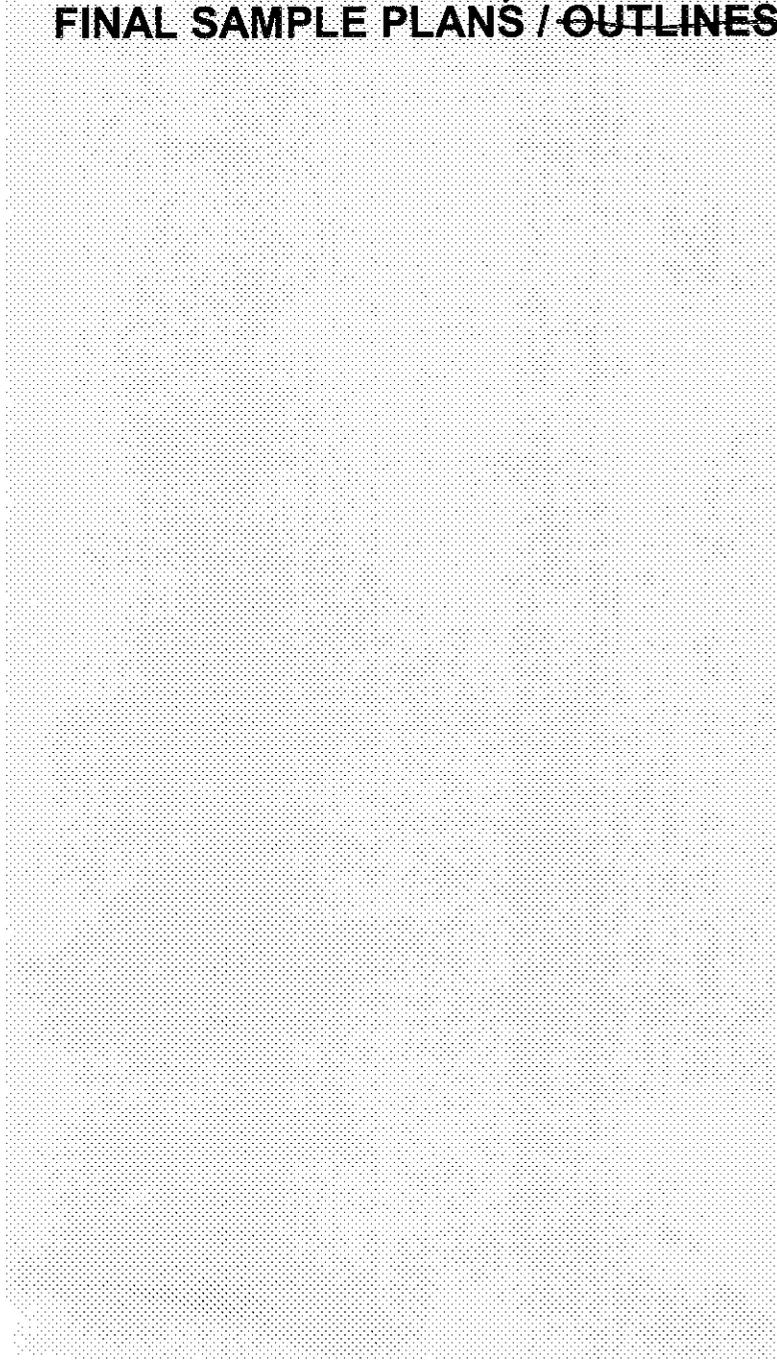


Final Submittal

**ST. LUCIE AUGUST 2004
EXAM NOS. 05000335/2004301
AND 05000389/2004301**

AUGUST 9 - 20, 2004

FINAL SAMPLE PLANS / OUTLINES



ES-401

PWR Examination Outline

ES-401-2 draft Rev 9

Facility: St. Lucie		Date of Exam: 8/20/2004																	
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	K	A	A 2	G *	Total	
1 Emergency & Abnormal Plant Evolutions	1	1	2	2				4	7				2	18	2	0	1	4	7
	2	1	2	2				2	1				1	9	0	0	2	3	5
	Tier Totals	2	4	4				6	8				3	27	2	0	3	7	12
2 Plant Systems	1	2	4	1	2	2	0	3	6	2	4	2	28	1	0	0	3	4	
	2	4	0	1	2	0	2	0	0	0	1	0	10	1	0	0	1	2	
	Tier Totals	6	4	2	4	2	2	3	6	2	5	2	38	2	0	0	4	6	
3 Generic Knowledge and Abilities Categories		1				2			3		4			1 2 3 4					
		2				3			2		3		10	1 2 2 2				7	

Note: 1. Ensure that at least two topics from every K/A category are sampled within each tier of the RO Outline (i.e., the "Tier Totals" in each K/A category shall not be less than two). Refer to Section D.1.c for additional guidance regarding SRO sampling.

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. Select topics from many systems; avoid selecting more than two K/A topics from a system unless they relate to plant-specific priorities.

4. Systems /evolutions within each group are identified on the associated outline.

5. The shaded areas are not applicable to the category/tier.

6.* 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. The SRO K/As must also be linked to 10 CFR 55.43 or an SRO-level learning objective.

7. On the following pages, enter the K/A numbers, a brief description of each topic, the topic's 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; summarize all the SRO-only knowledge and non-A2 ability categories in the columns labeled "K" and "A." Use duplicate pages for RO and SRO-only exams.

8. For Tier 3, enter the K/A numbers, descriptions, importance ratings, and point totals on Form ES-401-3.

9. Refer to ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements.

ES-401	PWR Examination Outline										ES-401-2 draft Rev	
Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO)												
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G 2	K/A Topic(s)	Imp.	#			
000001 Continuous Rod Withdrawal / 1							Randomly deselected					
000003 Dropped Control Rod / 1							Randomly deselected					
000005 Inoperable/Stuck Control Rod / 1							Randomly deselected					
000024 Emergency Boration / 1		2.04					Knowledge of the interrelations between the Emergency Boration and the following: AK2.04 Pumps 2.6 2.5 (CFR 41.7 / 45.7)	2.6	1129			
000028 Pressurizer Level Malfunction / 2				1.07			Ability to operate and / or monitor the following as they apply to the Pressurizer Level Control Malfunctions: AA1.07 Charging pumps maintenance of PZR level (including manual backup) 3.3 / 3.3 (CFR 41.7 / 45.5 / 45.6)	3.3	1084			
000032 Loss of Source Range NI / 7				1.01			Ability to operate and / or monitor the following as they apply to the Loss of Source Range Nuclear Instrumentation: AA1.01 Manual restoration of power 3.1* 3.4* (CFR 41.7 / 45.5 / 45.6)	3.1*	1091			
000033 Loss of Intermediate Range NI / 7							Randomly deselected					
000036 Fuel Handling Accident / 8							Randomly deselected					
000037 Steam Generator Tube Leak / 3					2.08		Ability to determine and interpret the following as they apply to the Steam Generator Tube Leak: AA2.08 Failure of Condensate air ejector exhaust monitor 2.8 / 3.3 (CFR: 43.5 / 45.13)	2.8	1085			
000051 Loss of Condenser Vacuum / 4			3.01				Knowledge of the reasons for the following responses as they apply to the Loss of Condenser Vacuum: AK3.01 Loss of steam dump capability upon loss of condenser vacuum 2.8* / 3.1* (CFR 41.5,41.10 / 45.6 / 45.13)	2.8*	1086			
000059 Accidental Liquid Radwaste Rel. / 9							Randomly deselected					
000060 Accidental Gaseous Radwaste Rel. / 9							Randomly deselected					
000061 ARM System Alarms / 7							Randomly deselected					
000067 Plant Fire On-site / 9							Randomly deselected					
000068 Control Room Evac. / 8							Randomly deselected					
000069 Loss of CTMT Integrity / 5							Randomly deselected					
000074 Inad. Core Cooling / 4						1.27	Knowledge of system purpose and or function. (CFR: 41.7) RO 2.6 SRO 2.9	2.8	1130			
000076 High Reactor Coolant Activity / 9							Randomly deselected					
CE/E09 Functional Recovery							Randomly deselected					
CE/A11 RCS Overcooling - PTS / 4			3.4				Knowledge of the reasons for the following responses as they apply to the (RCS Overcooling) - AK3.4 RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facilities license and amendments are not violated. IMPORTANCE RO 3.1 SRO 3.3 (CFR: 41.5 / 41.10, 45.6, 45.13)	3.1	1088			
CE/A13 Natural Circ. / 4		1.1					Knowledge of the operational implications of the following concepts as they apply to the (Natural Circulation Operations) AK1.1 Components, capacity, and function of emergency systems. IMPORTANCE RO 3.0 SRO 3.5(CFR: 41.8 / 41.10 / 45.3)	3.0	1090			
CE/A16 Excess RCS Leakage / 2		2.1					Knowledge of the interrelations between the (Excess RCS Leakage) and the following: (CFR: 41.7 / 45.7) AK2.1 Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features. IMPORTANCE RO 3.2 SRO 3.5	3.2	1089			
K/A Category Totals:	1	2	2	2	1	1		Group Point Total:	9	9		

PWR Examination Outline													ES-401-2 draft		
Plant Systems - Tier 2 Group 1 (RO)													Rev 6		
System # / Name	R	R	R	R	R	R	A	A	A	A	A	A	K/A Top(s)	Imp.	#
003 Reactor Coolant Pump	1.2												Knowledge of the physical connections and/or cause-effect relationships between the RCPS and the following systems: K1.12 CCWS 3.0 3.3 (CFR: 41.2 to 41.9 / 45.7 to 45.8)	3.0	1026
004 Chemical Volume Control	2.33												Knowledge of bus power supplies to the following: K2.06 Control instrumentation 2.6* 2.7 (CFR: 41.7)	2.8*	1027
004 Chemical Volume Control								2.24					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: A2.24 Isolation of both letdown filters at one time; downstream relief lifts 2.8 2.8 (CFR: 41.5 / 43.5 / 45.3 / 45.5)	2.8	1106
005 Residual Heat Removal									1.05				Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the RHRS controls including: A1.35 Detection of and response to presence of water in RHR emergency sump 3.3* 3.3* (CFR: 41.5 / 45.5)	5.3*	1126
005 Residual Heat Removal						5.01							Knowledge of the operational implications of the following concepts and they apply the RHRS: K5.01 No ductility transition temperature (brittle fracture) 2.8 2.9 (CFR: 41.5 / 45.7)	2.8	1129
006 Emergency Core Cooling								2.12					Ability to (c) predict the impacts of the following malfunctions or operations on the ECCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.12 Conditions requiring actuation of ECCS 4.5 4.6 (CFR: 41.5 / 45.5)	4.5	1036
007 Pressurizer Relief/Quench Tank									1.61				Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the PRTS controls including: (CFR: 41.5 / 45.5) A1.61 Maintaining quench tank water level within limits 2.9 / 3.1	2.9	1035
008 Component Cooling Water										2.08			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: A2.05 Effect of loss of instrument and control air on the position of the CCW valves that are air operated 3.2* 3.5 (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.3*	1032
008 Component Cooling Water											4.32		Ability to manually operate and/or monitor in the control room: A4.32 Filling and draining operations of the CCWS including the proper venting of the components 2.5* 2.5 (CFR: 41.7 / 45.5)	2.5*	1127
010 Pressurizer Pressure Control									1.05				Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the PZR PCS controls including: A1.05 Pressure effect on level 2.8 2.8 (CFR: 41.5 / 45.5)	2.8	1033
012 Reactor Protection						5.01							Knowledge of the operational implications of the following concepts and they apply to the RPS: K5.01 DNB 3.3* 3.8 (CFR: 41.5 / 45.7)	3.3*	1038
012 Reactor Protection	1.05												K1 Knowledge of the physical connections and/or cause effect relationships between the RPS and the following systems: K1.06 T/G 3.1* 3.1 (CFR: 41.2 to 41.8 / 45.7 to 45.8)	3.1	1131
013 Engineered Safety Features Actuation						3.63							Knowledge of the effect that a loss or malfunction of the ESFAS will have on the following: K3.03 Containment 4.3 4.7 (CFR: 41.7 / 45.6)	4.3	1037
013 Engineered Safety Features Actuation												1.23	Ability to perform specific system and integrated plant procedures during all modes of plant operation (CFR: 45.2 / 45.6) IMPORTANCE RO 3.0 BRO 4.0	3.0	1036.3
022 Containment Cooling											3.01		Ability to monitor automatic operation of the CCS, including: A3.01 Initiation of safeguards mode of operation 4.1 4.3 (CFR: 41.7 / 45.5)	4.1	1039
022 Containment Spray	2.01												Knowledge of bus power supplies to the following: K2.01 Containment spray pumps 3.4* 3.8 (CFR: 41.7)	3.4*	1040
056 Condensate											2.04		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: A2.04 Loss of condensate pumps 2.6 2.8* (CFR: 41.5 / 43.5 / 45.3 / 45.13)	2.6	1043
059 Main Feedwater						4.19							Knowledge of MPW design feature(s) and/or interlock(s) which provide for the following: K4.19 Automatic feedwater isolation of MPW 3.2 3.4 (CFR: 41.7)	3.2	1044
061 Auxiliary/Emergency Feedwater						4.02							Knowledge of AFW design feature(s) and/or interlock(s) which provide for the following: K4.02 AFW automatic start upon loss of MPW pump, S/G level, blackout, or safety injection 4.5 4.6 (CFR: 41.7)	4.5	1045
062 AC Electrical Distribution											2.08		Ability to (c) predict the impacts of the following malfunctions or operations on the ac distribution system; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.09 Consequences of exceeding current limitations 2.7 3.0* (CFR: 41.5 / 43.5 / 45.3 / 45.15)	2.7	1047.1
062 AC Electrical Distribution												4.32	Ability to manually operate and/or monitor in the control room: A4.02 Remote racking in and out of breakers 2.5 2.8 (CFR: 41.7 / 45.5 / 45.8)	2.5	1048
063 DC Electrical	2.21												Knowledge of bus power supplies to the following: (CFR: 41.7) K2.01 Major DC loads 2.9* 3.1*	2.9*	1049
064 Emergency Diesel Generator	2.03												Knowledge of bus power supplies to the following: K2.03 Control power 3.2* 3.6 (CFR: 41.7)	3.2*	1050
073 Process Radiation Monitoring											4.31		Ability to manually operate and/or monitor in the control room: A4.01 Effluent release 3.8 3.8 (CFR: 41.7 / 45.5 to 45.6)	3.9	1051.1
076 Service Water											2.01		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: A2.01 Loss of SWS 3.5* 3.7* (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.5*	1052.1
078 Instrument Air												4.4	2.4 Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures (CFR 41.10 / 45.2 / 45.8)	4.0	1134
078 Instrument Air												4.01	Ability to manually operate and/or monitor in the control room: (CFR: 41.7 / 45.5 to 45.8) A4.01 Pressure gauges 3.1 3.1	3.1	1053
103 Containment											3.01		Ability to monitor automatic operation of the containment system, including: (CFR: 41.7 / 45.5) A3.01 Containment isolation 3.9 4.2	3.9	1054
K/A Category Totals:	2	4	1	2	2	0	3	5	2	4	2		Group Point Total:	28	28

ES-401	PWR Examination Outline													ES-401-2 draft	
	Plant Systems - Tier 2 Group 2 (RO)													Rev 9	
System # / Name	K1	R1	R2	K3	K4	R5	R6	A1	A2	A3	A4	G2	K/A Topic(s)	Imp.	#
001 Control Rod Drive													Randomly deselected		
002 Reactor Coolant						6.12							Knowledge of the effect or a loss or malfunction on the following RCS components: K6.12 Code Safety valves 3.0 3.5(CFR: 41.7 / 45.7)	3.0	1055
011 Pressurizer Level Control											4.01		Ability to manually operate and/or monitor in the control room: A4.01 Charging pump and flow controls 3.5 3.2 (CFR: 41.7 / 45.5 to 45.8)	3.5	1056
014 Rod Position Indication													Randomly deselected		
015 Nuclear Instrumentation													Randomly deselected		
016 Non-nuclear Instrumentation													Randomly deselected		
017 In-core Temperature Monitor			3.01										Knowledge of the effect that a loss or malfunction of the ITM system will have on the following: (CFR: 41.7 / 45.6) K3.01 Natural circulation indications 3.5* 3.7*	3.5*	1057.1
027 Containment Iodine Removal	1.01												Knowledge of the physical connections and/or cause effect relationships between the CIRS and the following systems: K1.01 CSS 3.4* 3.7* (CFR: 41.2 to 41.9 / 45.7 to 45.8)	3.4*	1058
028 Hydrogen Recombiner and Purge Control													Randomly deselected		
029 Containment Purge	1.02												Knowledge of the physical connections and/or cause effect relationships between the Containment Purge System and the following systems: K1.02 Containment radiation monitor 3.3/3.6	3.3	1059
033 Spent Fuel Pool Cooling													Randomly deselected		
034 Fuel Handling Equipment													Randomly deselected		
035 Steam Generator	1.13												Knowledge of the physical connections and/or cause-effect relationships between the S/GS and the following systems: K1.13 Condensate system 2.7 2.8 (CFR: 41.2 to 41.9 / 45.7 to 45.8)	2.7	1060
041 Steam Dump/Turbine Bypass Control						6.03							Knowledge of the effect of a loss or malfunction on the following will have on the SDS: K6.03 Controller and positioners, including ICS, S/G, CRDS 2.7 2.9 (CFR: 41.7 / 45.7)	2.7	1061
045 Main Turbine Generator													Randomly deselected		
055 Condenser Air Removal													Randomly deselected		
068 Liquid Rad Waste	1.07												Knowledge of the physical connections and/or cause effect relationships between the Liquid Radwaste System and the following systems: K1.07 Sources of liquid wastes for LRS 2.7 2.9 (CFR: 41.2 to 41.9 / 45.7 to 45.8)	2.7	1062
071 Waste Gas Disposal				4.06									Knowledge of design feature(s) and/or interlock(s) which provide for the following: K4.06 Sampling and monitoring of waste gas release tanks 2.7* 3.5* (CFR: 41.7)	2.7*	1064
072 Area Radiation Monitoring													Randomly deselected		
075 Circulating Water				4.01									Knowledge of circulating water system design feature(s) and interlock(s) which provide for the following: K4.01 Heat sink 2.5 2.8 (CFR: 41.7)	2.5	1065
079 Station Air													Randomly deselected		
086 Fire Protection													Randomly deselected		
K/A Category Totals:	4	0	1	2	0	2	0	0	0	0	1	0	Group Point Total	10	10

ES-401		Generic Knowledge and Abilities Outline (Tier 3)		ES-401-3 Rev 9	
Facility: St. Lucie		Date of Exam: 8/20/2004		Level: RO	
Category	K/A #	Topic	imp.	#	
1 Conduct of Operations	2.1.11	2.1.11 Knowledge of less than one hour technical specification action statements for systems. (CFR: 43.2 / 45.13)	3.0	1092	
	2.1.19	2.1.19 Ability to use plant computer to obtain and evaluate parametric information on system or component status. (CFR: 45.12)	3.0	1116	
			Subtotal	2	2
2 Equipment Control	2.2.2	2.2.2 Ability to manipulate the console controls as required to operate the facility between shutdown and designated power levels. (CFR: 45.2)	4.0	1096	
	2.2.12	2.2.12 Knowledge of surveillance procedures. (CFR: 41.10 / 45.13)	3.0	1094	
	2.2.28	2.2.28 Knowledge of new and spent fuel movement procedures. (CFR: 43.7 / 45.13)	2.6	1095	
			Subtotal	3	3
3 Radiation Protection	2.3.9	2.3.9 Knowledge of the process for performing a containment purge. (CFR: 43.4 / 45.10)	2.5	1097	
	2.3.10	2.3.10 Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure. (CFR: 43.4 / 45.10)	2.9	1098	
			Subtotal	2	2
4 Emergency Procedures and Plan	2.4.24	2.4.24 Knowledge of loss of cooling water procedures. (CFR: 41.10 / 45.13)	3.3	1102	
	2.4.29	2.4.29 Knowledge of the emergency plan. (CFR: 43.5 / 45.11)	2.6	1099	
	2.4.34	2.4.34 Knowledge of RO tasks performed outside the main control room during emergency operations including system geography and system implications. (CFR: 43.5 / 45.13)	3.8	1063	
			Subtotal	3	3
Tier 3 Point Total			10	10	

ES-401		Generic Knowledge and Abilities Outline (Tier 3)			ES-401-3 Rev 9
Facility:	St. Lucie	Date of Exam:	8/20/2004	Level:	4
Category	K/A #	Topic	Imp.	#	SRO
1 Conduct of Operations	2.1.33	2.1.33 Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications. (CFR: 43.2 / 43.3 / 45.3)	3.9	1119	
			Subtotal	1	1
1 Equipment Control	2.2.5	2.2.5 Knowledge of the process for making changes in the facility as described in the safety analysis report. (CFR: 43.3 / 45.13)	2.7	1120	
	2.2.33	2.2.33 Knowledge of control rod programming. (CFR: 43.6)	2.9	1121	
			Subtotal	2	2
3 Radiation Protection	2.3.3	2.3.3 Knowledge of SRO responsibilities for auxiliary systems that are outside the control room (e.g., waste disposal and handling systems). (CFR: 43.4 / 45.10) IMPORTANCE RO 1.8 SRO 2.9	3.1	1134	
	2.3.4	2.3.4 Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized. (CFR: 43.4 / 45.10) IMPORTANCE RO 2.5 SRO 3.1	2.9	1133	
			Subtotal	2	2
4 Emergency Procedures and Plan	2.4.30	2.4.30 Knowledge of which events related to system operations/status should be reported to outside agencies. (CFR: 43.5 / 45.11)	3.4	1123	
	2.4.40	2.4.40 Knowledge of the SRO's responsibilities in emergency plan implementation. (CFR: 45.11)	4.0	1124	
			Subtotal	2	2
Tier 3 Point Total			7	7	

Tier and Group	Randomly Selected KIA	Reason for Rejection
Tier 1 Group 1 SRO Exam	EPE 009EA2.06 Small Break LOCA EA1 Ability to operate and monitor the following as they apply to a small break LOCA: EA2.06 Whether PZR water inventory loss is imminent 3.8 4.3 (CFR 41.7 / 45.5 / 45.6)	This KIA was randomly sampled for the SRO exam but it was not possible to write an SRO level question that was accepted by the NRC. At the direction of the NRC, this KIA was replaced with APE 008AK3.03 Pressurizer (PZR) Vapor Space Accident (Relief Valve Stuck Open) AK3. Knowledge of the reasons for the following responses as they apply to the Pressurizer Vapor Space Accident: AK3.03 Actions contained in EOP for PZR vapor space accident/ LOCA 4.1 4.6 (CFR 41.5, 41.10 / 45.6 / 45.13) This KIA had been previously randomly selected for the RO exam but was deemed to be too complex for RO level of knowledge. These KIAs were swapped because the respective questions were in the same Tier and Group. Directed to take this action by the NRC Chief Examiner on 7/23/04. RO question 1066 was swapped with SRO question 1107.
Tier 1 Group 1 SRO Exam	APE 027G1.30 Pressurizer Pressure Control System Malfunction Ability to locate and operate components, including local controls. RO 3.9 SRO 3.4 (CFR: 41.7 / 45.7)	This KIA is inappropriate for the SRO exam. The RO KIA importance-to-safety rating is higher than the SRO rating. The KIA is not cross-referenced to 10CFR55.43. Received permission to shift KIAs per NRC Chief Examiner Rick Baldwin Telcon 4/28. The new KIA is: G2.2.22 Knowledge of limiting conditions for operations and safety limits. (CFR: 43.2 / 45.2) IMPORTANCE RO 3.4 SRO 4.1 Jogging RCPs is done under Westinghouse EOPs - not CE EOPs. The original KIA does not apply to CE plants.
Tier 1 Group 1 SRO Exam	APE 015/17AA2.11 RCP Malfunction Ability to determine and interpret the following as they apply to the Reactor Coolant Pump Malfunctions (Loss of RC Flow): When to jog RCPs during ICC 3.4* 3.8*	Resampled to AA2.02 Abnormalities in RCP air vent flow paths and/or oil cooling system 2.8 3.0 (CFR: 43.5 / 45.13)
Tier 1 Group 1 SRO Exam	EPE 029AA2.08 - Anticipated Transient w/o Scram - EA2.08 Rod bank step counters and RPI 3.4 3.5	This knowledge had been tested in several other places in the RO exam. The concern was that double jeopardy might occur if we crafted a question testing the same knowledge. Received permission from Rick Baldwin on 5/19 to shift KIAs to G2.4.38 Ability to take actions called for in the facility emergency plan, including (if required) supporting or acting as emergency coordinator. (CFR: 43.5 / 45.11) IMPORTANCE RO 2.2 SRO 4.0
Tier 1 Group 1 SRO Exam	APE 015/017AA2.02 Reactor Coolant Pump (RCP) Malfunctions AA2. Ability to determine and interpret the following as they apply to the Reactor Coolant Pump Malfunctions (Loss of RC Flow): AA2.02 Abnormalities in RCP air vent flow paths and/or oil cooling system 2.8 3.0 (CFR: 43.5 / 45.13)	This KIA was randomly sampled for the SRO exam but it was not possible to write an SRO level question that was accepted by the NRC. At the direction of the NRC, this KIA was replaced with APE040AK1.07 Steam Line Rupture AK1. Knowledge of the operational implications of the following concepts as they apply to Steam Line Rupture: AK1.07 Effects of feedwater introduction on dry S/G 3.4 4.2 (CFR 41.8 / 41.10 / 45.3) The question for this KIA (1114) was swapped to the RO exam and replaced by question 1067 on the SRO exam - which is documented separately in ES-401-4.
Tier 1 Group 2 RO Exam	EPE 009EK2.03 009 Small Break LOCA EK2 Knowledge of the interrelations between the small break LOCA and the following: EK2.03 S/Gs 3.0 3.3* (CFR 41.7 / 45.7)	Question 1067 was swapped with question 1114 on the SRO exam. In order to maintain the integrity of the sample plan, the KIA for this question was changed to CE/A13AA2.2 Ability to determine and interpret the following as they apply to the (Natural Circulation Operations) AA2.2 Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments. IMPORTANCE RO 2.9 SRO 3.8 (CFR: 43.5 / 45.13)
Tier 2 Group 1 SRO Exam	SYS 004A2.24 - Chemical and Volume Control System A2 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: A2.24 Isolation of both letdown filters at one time; downstream relief lifts. 2.8 2.8 (CFR: 41.5 / 43/5 / 45/3 / 45/5)	This KIA was randomly sampled for the SRO exam but it was not possible to write an SRO level question that was accepted by the NRC. At the direction of the NRC, this KIA was replaced with SYS 026K3.02 Containment Spray K3 Knowledge of the effect that a loss or malfunction of the CSS will have on the following: K3.02 Recirculation spray system 4.2* 4.3 (CFR: 41.7 / 45.6). This KIA had been previously randomly selected for the RO exam but the associated question was deemed to be too complex for RO level of knowledge. These KIAs were swapped because the respective questions were in the same Tier and Group. Directed to take this action by the NRC Chief Examiner on 7/23/04. RO question 1041.1 was swapped with SRO question 1100.
Tier 2 Group 1 RO Exam	SYS 007K5.02 Pressurizer Relief/Quench Tank - Knowledge of the operational implications of the following concepts as they apply to PRTS: K5.02 Method of forming a steam bubble in the PZR 3.1 3.4 (CFR: 41.5 / 45.7)	The formation of a bubble in the PZR has no effect on the Quench Tank at St. Lucie. This KIA is not applicable. Received permission to shift KIAs per Rick Baldwin TELCON 4/28 Randomly reselected A1.01 Maintaining quench tank water level within limits 2.9 3.1
Tier 2 Group 1 SRO Exam	SYS 078A2.01 Instrument Air System (IAS) Ability to (a) predict the impacts of the following malfunctions or operations on the IAS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.01 Air dryer and filter malfunctions 2.4 2.9 (CFR: 41.5 / 43.5 / 45.3 / 45.13)	This KIA was randomly sampled for the SRO exam but it was not possible to write an SRO level question that was accepted by the NRC. At the direction of the NRC, this KIA was replaced with SYS 039G2.2.22 Main and Reheat Steam 2.2.22 Knowledge of limiting conditions for operations and safety limits. (3.4/4.1) (CFR: 43.2 / 45.2). This KIA had been previously randomly selected for the RO exam but was deemed to be too complex for RO level of knowledge. These KIAs were swapped because the respective questions were in the same Tier and Group. Directed to take this action by the NRC Chief Examiner on 7/23/04. RO question 1042 was swapped with SRO question 1104.

Tier and Group	Randomly Selected K/A	Reason for Rejection
Tier 2 Group 1 SRO Exam	SYS 010AA2.02 Pressurizer Pressure Control - Ability to (a) predict the impacts of the following malfunctions or operations on the PZR PCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: A2.02 Spray valve failures 3.9 3.9 (CFR: 41.5 / 43.5 / 45.3 / 45.13)	After multiple attempts to craft an acceptable question that addressed the K/A and tested appropriate SRO-only level of knowledge, the K/A was replaced when FPL was unable to provide an acceptable question and the NRC was unable to think of any possible way to test the K/A and still meet their requirements for "SRO-only" questions. At the last minute, FPL requested that the NRC either provide some idea of what could be tested for this K/A - or direct the replacement of the K/A by a new K/A from which FPL could create an SRO-only question. The NRC Chief Examiner directed FPL to use SYS 010 G 2.2.24 Pressurizer Pressure Control - Ability to analyze the affect of maintenance activities on LCO status. (CFR: 43.2 / 45.13) IMPORTANCE RO 2.6 SRO 3.8. This change was made at 1530 on the last day (Friday 7/30) that the exam questions were due for NRC in order to meet the required final exam shipping date of Monday 8/2. This K/A is an example of where the original K/A was randomly and systematically selected, was tied in the K/A catalogue to 10CFR55.43, had an SRO level of importance of 3.9 and still an experienced exam writer could not craft an acceptable question.
Tier 2 Group 1 RO Exam	SYS 061A3.01 Knowledge of the effect that a loss or malfunction of the AFW will have on the following: K3.01 RCS 4.4 4.6 (CFR: 41.7 / 45.6)	Question 1046 was determined to be more appropriate for testing at the SRO level. This question was swapped with Question 1131 and moved from the RO to the SRO exam. In order to maintain the sampling plan integrity, the KA was changed to SYS 002 RCS K1.11 Knowledge of the physical connections and/or cause-effect relationships between the RCS and the following systems: K1.11 S/GS, feedwater systems 4.1 4.2 (CFR: 41.2 to 41.9 / 45.7 to 45.8) as directed by the NRC Chief Examiner.
Tier 2 Group 2 RO Exam	SYS 029K1.04 Containment Purge - Knowledge of the physical connections and/or cause effect relationships between the Containment Purge System and the following systems: K1.04 Purge system 3.07 3.1? (CFR: 41.2 to 41.9 / 45.7 to 45.8)	This K/A is not applicable at St. Lucie. The K/A asks the system interaction between the containment purge system and the purge system. There is no interaction between the containment purge system (accident system) and the containment air release system (normal air release) at St. Lucie. The only questions that could be asked would be regarding when it is appropriate to use each system. While this is important knowledge, it is difficult to craft a psychometrically valid question that would be adequately discriminatory. Obtained permission to randomly reselect a new K/A from the NRC Chief Examiner per telcon 4/28/04. New K/A is K1.02 - Knowledge of the physical connections and/or cause effect relationships between the Containment Purge System and the following systems: K1.02 Containment radiation monitor 3.3/ 3.6
Tier 2 Group 2 SRO Exam	SYS 045G2.1.33 Main Turbine Generator - Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications. (CFR: 43.2 / 43.3 / 45.3) IMPORTANCE RO 3.4 SRO 4.0	There are no Tech Specs covering the Main Turbine - not applicable at St. Lucie. Randomly reselected K/A 045G2.4.5 Ability to perform without reference to procedures those actions that require immediate operation of system components and controls. (CFR: 41.10 / 43.2 / 45.6) IMPORTANCE RO 4.0 SRO 4.0
Tier 2 Group 2 SRO Exam	045 Main Turbine Generator G2.4.49 Ability to perform without reference to procedures those actions that require immediate operation of system components and controls. (CFR: 41.10 / 43.2 / 45.6) IMPORTANCE RO 4.0 SRO 4.0	Question 1131 was determined not to be appropriate for SRO-level testing. Question 1046 was determined to be inappropriate for RO level testing. The questions were swapped between the exams. The K/As for these questions had to be revised in order to maintain the sampling plan requirements. SYS045G2.1.33 was replaced by SYS 012K1.06 (Tier 2 Group 1) Reactor Protection K1 Knowledge of the physical connections and/or cause effect relationships between the RPS and the following systems: K1.06 T/G 3.1* 3.1 (CFR: 41.2 to 41.9 / 45.7 to 45.8).
Tier 3	2.3.4 Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized. (CFR: 43.4 / 45.10)	After multiple attempts to craft an acceptable question that addressed the K/A and tested appropriate SRO-only level of knowledge, the K/A was replaced when FPL was unable to provide an acceptable question and the NRC was unable to think of any possible way to test the K/A. The NRC directed FPL to use K/A G 2.3.3 Knowledge of SRO responsibilities for auxiliary systems that are outside the control room (e.g., waste disposal and handling systems). (CFR: 43.4 / 45.10) IMPORTANCE RO 1.8 SRO 2.9