

# Draft Submittal

(Pink Paper)

## SEQUOYAH NUCLEAR PLANT EXAM 2002-301 50-327 & 50-328

DECEMBER 2 - 6, 2002

1. Written Exam Sample outlines

*INITIAL DRAFT OUTLINES  
FOR EVERYTHING*

ES-301

Administrative Topics Outline

Form ES-301-1

Facility: <u>Sequoyah</u>		Date of Examination: _____	
Examination Level (circle one): <u>RO/SRO</u>		Operating Test Number: <u>1</u>	
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions	
A.1	<del>Conduct Of</del>	<del>JPM - 1001</del>	
	<del>Operations</del>	Max # of fuel assemblies in reheat canal 2.2.30 3.5	
	<del>fuel handling</del>	Unexp. # in cont rate during fuel load 2.2.30 3.5	
	<del>96194</del> <del>810015</del>	<del>Activating an inactive license 2.1.4 3.4</del>	
		<del>Duties of the U.S. 2.1.4 3.4</del>	
A.2	Equipment Control	Work Request Priority 2.2.19 3.1	
		Release Equip for maint. 2.2.17 3.5	
A.3	Radiation Control	<del>Reparations for RCT Exit 2.3.5 2.6</del>	
		<del>Exposure Action Levels 2.3.4 3.1</del>	
A.4	Emergency Plan	JPM # 120 Classify REP/PARS	

JPM

ES-301

Administrative Topics Outline

Form ES-301-1

Facility: <u>Sequoyah</u>		Date of Examination: _____	
Examination Level (circle one): <u>RO/SRO</u>		Operating Test Number: <u>1</u>	
Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions	
A.1	Conduct of plant parameter verification Operations	JPM - 161 cal. Subcooling Margin	LOD? 002 01.04 3.9
	Appl. of T.S.	Application of chem. T.S.	2.1.33 3.4
		Deviation from T.S.	2.1.10 2.7
A.2	Equipment Control	Abnormal seal leak off flow	2.2.2 4.0
		Red Thermal lockup	2.2.1 3.7
A.3	Radiation Control	<del>Location of High Rad Keys</del>	<del>2.1.13</del>
		<del>Electronic Exp. System down</del>	<del>2.3.7</del>
A.4	Emergency Plan	156, Monitor status Trees - explain	

JPM

**ES-301 Control Room Systems and Facility Walk-Through Test Outline Form ES-301-2**

 Facility: Sequoyah  
 Exam Level (circle one): RO

 Date of Examination: \_\_\_\_\_  
 Operating Test No.: 1
**B.1 Control Room Systems**

System / JPM Title	Type Code*	Safety Function
150, Flush Unit 1 Blender Piping	D, S	1 ✓ <i>discuss</i>
136, Recovery from SI and Solid Water Conditions	D, S, L	3
077-4 AP2, Perform D/G Load Test on 1A-A D/G	D, S, A	6 ✓
013 AP1, Transfer to Hot Leg Recirculation	D, S, A, L <i>✓</i>	2
021, Respond to a Failure of PR N-41	D, S	7 ✓
065, Re-establishment of Containment Pressure Control	D, S	5 ✓
014 AP, Control Room Inaccessibility	N, S, A, L	8 ✓
099 AP, Locally Align 1B-B CCS Pump to Supply B Train	D, P, R, A	8
085, Isolate RCP Seals, Thermal Barrier, and Containment following a Loss of All AC Power	D, P, R, L	4P <i>→ ?</i>
201R AP1, Local Isolation of Charging with Local Control of Seal Injection Flow	N, P, R, L, A	2

\* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

*5 AP*

**ES-301 Control Room Systems and Facility Walk-Through Test Outline****Form ES-301-2**

Facility: <u>Sequoyah</u>		Date of Examination: _____
Exam Level (circle one): <u>SRO (U)</u>		Operating Test No.: <u>1</u>
<b>B.1 Control Room Systems</b>		
System / JPM Title	Type Code*	Safety Function
64AP, Align ECCS Pumps and Containment Spray Pumps	D, A, S PSA	2
77-5 AP, Perform D/G Load Test on 1B-B D/G	D, A, S	6
021, Respond to a Failure of PR N-41	D, S	7
098, Align CCS Pump 1B-B to Supply B Train Header	D, P, R ↓   ↓	8
209R, Removing Power from Various Components During an Appendix R Fire	N, A, P, L ↓   ↓	6
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

80% Bank ✓

3 AP X

1 LP ✓

## Appendix D

## Scenario Outline

Form ES-D-1

Facility: Sequoyah Scenario No.: 1 Op-Test No.: 1Examiners: \_\_\_\_\_ Operators: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Initial Conditions: Plant is at 58% power following a trip after a refueling outage.  
10 gpd SGTL in #3 S/GTurnover: Increase power to 85%. A Severe Thunderstorm Warning is in effect for Hamilton and Rhea counties for the next 2 hours. There is increased security due to validated threats.

Event No.	Mal. No.	Event Type*	Event Description
			Set up simulator to IC- 8.
Preinsert:		<del>C</del>	"B" Containment Spray Pump OOS - <i>red tag</i>
Preinsert:		<del>C</del>	"A" MDAFW Pump OOS - <i>red tag</i>
Preinsert:		<del>C</del>	"B" MDAFW fails to auto start
Preinsert:		C	Phase "A" fails to actuate
1	-	N (RO)	Start 2 <sup>nd</sup> MFP
2	-	R (RO, <del>BOP</del> )	Increase power to 85%
3		I (RO)	PZR Level Channel fails High
4		C (RO)	#3 Atmospheric Relief valve fails open after SGTL
5		I (BOP)	<u>PT-1-73</u> Fails low <i>NOOP NAME</i>
6		C (BOP)	Air system rupture, can be isolated
7		M (All)	#3 S/G Tube Rupture

## Appendix D

## Scenario Outline

Form ES-D-1

Facility: Sequoyah Scenario No.: 2 Op-Test No.: 1

Examiners: \_\_\_\_\_ Operators: \_\_\_\_\_

Initial Conditions: Plant is at 100% power EOL proceeding to a refueling outage.10 gpd leak in #3 7/6Turnover: Commence a <sup>rapid</sup> normal plant shutdown IAW <sup>APP</sup> ~~GO~~. A Severe Thunderstorm Warning is in effect for Hamilton and Rhea counties for the next 2 hours. There is increased security due to ~~un~~ validated threats. condition change in effect

Event No.	Malfunction No.	Event Type*	Event Description
			Set up simulator to IC- 12.
Preinsert		C	"B" Containment Spray Pump OOS <sup>PT</sup>
Preinsert		C	"A" MDAFW Pump OOS <sup>PT</sup>
Preinsert		C	TDAFW pump fails <sup>shuts see notes</sup>
Preinsert		C	Containment Spray Fails to actuate
1	-	N (RO)	Swap CCP's for maintenance preps
2	-	R (RO) <del>BOP</del>	Shutdown the plant IAW <del>GO</del> <sup>APP</sup>
3		I (RO)	VCT Level Channel fails High
4		C (RO)	<del>Thermal Barrier Booster Pump Fails</del> <u>Letdown Relief valve lifts</u>
5		I (BOP)	<u>PT-3-1</u> Fails High <sup>known name</sup>
6		C (BOP)	MFRV Controller fails
7		M (All)	#1 & 2 S/G Break I/S Containment

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor, (P)RA, (L)ow Power

## Appendix D

## Scenario Outline

Form ES-D-1

Facility: Sequoyah Scenario No.: 3 Op-Test No.: 1

Examiners: \_\_\_\_\_ Operators: \_\_\_\_\_

Initial Conditions: Plant is at 94% power following a trip after a refueling outage.10 gpd leak in 4 3 5/8Turnover: Increase power to 100%. A Severe Thunderstorm Warning is in effect for Hamilton and Rhea counties for the next 2 hours. There is increased security due to ~~the~~ validated threats.

Event No.	Malf. No.	Event Type*	Event Description
			Set up simulator to IC- 9.
Preinsert		C	"B" Containment Spray Pump OOS - <i>RT</i>
Preinsert		C	"A" MDAFW Pump OOS - <i>RT</i>
Preinsert		C	<del>"A"</del> <sup>B</sup> CCP fails on start
Preinsert		C	"A" EDG fails to start
1	-	N (RO) <i>BOP?</i>	Transfer Electrical Board
2	-	R (RO) <del>BOP</del>	Increase Power to 100%
3		I (RO)	PZR Level channel fails High
4		C (RO)	25 GPM leak on letdown line in Containment
5		I (BOP)	<u>PT-1-<sup>33</sup> fails High</u> <i>Now Name</i>
6		C (BOP)	ERCW Pump Trips
7		M (All)	Small Break LOCA

\* (I)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor, (P)RA, (L)ow Power



## Appendix D

## Scenario Outline

Form ES-D-1

Facility: Sequoyah Scenario No.: 4 Op-Test No.: 1Examiners: \_\_\_\_\_ Operators: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_Initial Conditions: Plant is at 94% power following a trip after a refueling outage.10 gpd leak in #3 S/BTurnover: Decrease power to 85% for a turbine valve test. A Severe Thunderstorm Warning is in effect for Hamilton and Rhea counties for the next 2 hours. There is increased security due to ~~un~~ validated threats.

Event No.	Malf. No.	Event Type*	Event Description
			Set up simulator to IC- 9.
Preinsert		C	"B" Containment Spray Pump OOS <del>PL</del>
Preinsert		C	"A" MDAFW Pump OOS <del>PL</del>
Preinsert		C	"A" RHR Pump Fails
Preinsert		C	Phase "A" fails to actuate
1	-	N (RO)	Place Excess Letdown in Service
2	-	R (RO, <del>BOP</del> )	Decrease power to 85%
3		I (RO)	Tavg Channel fails High
4		C (RO)	Charging Flow Controller Fails to zero
5		I <del>PL</del> (BOP)	Loop 1 Steam Pressure Channel fails high
6		C (BOP)	"B" MFP trips
7		M (All)	Large Break LOCA Loop 1

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor, (P)RA, (L)ow Power

ES-401

## PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

Form ES-401-3

Exam Date: 12/02/2002Exam Level: SRO

Tier	Group	K/A Category Points											Point Total
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	
1. Emergency & Abnormal Plant Evolutions	1	4	4	4				4	5			3	24
	2	3	3	3				3	3			1	16
	3	1	0	0				0	2			0	3
	Tier Totals	8	7	7				7	10			4	43
2. Plant Systems	1	1	2	1	2	2	2	3	1	2	1	2	19
	2	2	1	1	2	1	2	2	1	2	1	2	17
	3	1	0	0	1	0	0	1	0	0	0	1	4
	Tier Totals	4	3	2	5	3	4	6	2	4	2	5	40
3. Generic Knowledge And Abilities				Cat 1		Cat 2		Cat 3		Cat 4			
				4		4		5		4		17	

Note: 1. Ensure that at least two topics from every K/A category are sampled within each tier (i.e., the "Tier Totals" in each K/A category shall not be less than two).  
 2. Actual point totals must match those specified in the table.  
 3. Select topics from many systems; avoid selecting more than two or three K/A topics from a given 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 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.  
 7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings for the RO license level, and the point totals for each system and category. K/As below 2.5 should be justified on the

12 A2

# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

## Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-3

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
001	Continuous Rod Withdrawal / 1	X						AK1.03 - Relationship of reactivity and reactor power to rod movement	4.0	1
003	Dropped Control Rod / 1						X	2.4.4 - Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.3	1
015	Reactor Coolant Pump (RCP) Malfunctions / 4		X					AK2.08 - CCWS	2.6	1
015	Reactor Coolant Pump (RCP) Malfunctions / 4					X		AA2.07 - Calculation of expected values of flow in the loop with RCP secured	2.9	1
024	Emergency Boration / 1				X			AA1.26 - Boric acid storage tank	3.3	1
029	Anticipated Transient Without Scram (ATWS) / 1		X					EK2.06 - Breakers, relays, and disconnects	3.1*	1
040	Steam Line Rupture / 4					X		AA2.01 - Occurrence and location of a steam line rupture from pressure and flow indications	4.7	1
040	Steam Line Rupture / 4	X						AK1.01 - Consequences of PTS	4.4	1
051	Loss of Condenser Vacuum / 4			X				AK3.01 - Loss of steam dump capability upon loss of condenser vacuum	3.1*	1

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Sep. 05 2002 02:05PM P11

# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-3

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
069	Loss of Containment Integrity / 5						X	2.1.14 - Knowledge of system status criteria which require the notification of plant personnel.	3.3	1
069	Loss of Containment Integrity / 5				X			AA1.03 - Fluid systems penetrating containment	3.0	1
074	Inadequate Core Cooling / 4	X						EK1.01 - Methods of calculating subcooling margin	4.7	1
074	Inadequate Core Cooling / 4		X					EK2.02 - PORV	4.0	1
076	High Reactor Coolant Activity / 9			X				AK3.05 - Corrective actions as a result of high fission-product radioactivity level in the RCS	3.6	1
E01	Radiagnosis / 3					X		EA2.1 - Facility conditions and selection of appropriate procedures during abnormal and emergency operations	4.0	1
E01	Radiagnosis / 3				X			EA1.1 - Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features	3.7	1
E04	LOCA Outside Containment / 3					X		EA2.1 - Facility conditions and selection of appropriate procedures during abnormal and emergency operations	4.3	1
E04	LOCA Outside Containment / 3		X					EK2.2 - Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility	4.0	1

24 choices  
No sample Tier 1 6P1 (24)  
16  
24

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:06PM P12

# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401 Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1 Form ES-401-3

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
E08	Pressurized Thermal Shock / 4			X				EK3.2 - Normal, abnormal and emergency operating procedures associated with Pressurized Thermal Shock	4.0	1
E09	Natural Circulation Operations / 4					X		EA2.1 - Facility conditions and selection of appropriate procedures during abnormal and emergency operations	3.8	1
E09	Natural Circulation Operations / 4				X			EA1.1 - Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features	3.5	1
E10	Natural Circulation with Steam Void in Vessel with/without RVLIS / 4			X				EK3.1 - Facility operating characteristics during transient conditions, including coolant chemistry and the effects of temperature, pressure, and reactivity changes and operating limitations and reasons for these operating characteristics	3.7	1
E12	Uncontrolled Depressurization of all Steam Generators / 4						X	2.4.16 - Knowledge of EOP implementation hierarchy and coordination with other support procedures.	4.0	1
E14	High Containment Pressure / 5	X						EK1.3 - Annunciators and conditions indicating signals, and remedial actions associated with the High Containment Pressure	3.6	1

K/A Category Totals: 4 4 4 4 5 3

Group Point Total: 24

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Sep. 05 2002 02:06PM P13

# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

## Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-3

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
009	Small Break LOCA / 3	X						EK1.01 - Natural circulation and cooling, including reflux boiling	4.7	1
022	Loss of Reactor Coolant Makeup / 2					X		AA2.01 - Whether charging line leak exists	3.8	1
025	Loss of Residual Heat Removal System (RHRS) / 4					X		AA2.06 - Existence of proper RHR overpressure protection	3.4*	1
025	Loss of Residual Heat Removal System (RHRS) / 4		X					AK2.05 - Reactor building sump	2.6	1
027	Pressurizer Pressure Control (PZR PCS) Malfunction / 3					X		AA2.04 - Tech-Spec limits for RCS pressure	4.3	1
027	Pressurizer Pressure Control (PZR PCS) Malfunction / 3	X						AK1.02 - Expansion of liquids as temperature increases	3.1	1
037	Steam Generator (S/G) Tube Leak / 3			X				AK3.03 - Comparison of makeup flow and letdown flow for various modes of operation	3.3	1
037	Steam Generator (S/G) Tube Leak / 3				X			AA1.11 - PZR level indicator	3.3	1
038	Steam Generator Tube Rupture (SGTR) / 3			X				EK3.08 - Criteria for securing RCP	4.2	1
058	Loss of DC Power / 6			X				AK3.01 - Use of dc control power by ED/Gs	3.7	1

12/21 sample 16

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Sep. 05 2002 02:07PM P14

# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

## Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-3

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
060	Accidental Gaseous Radwaste Release / 9		X					AK2.02 - Auxiliary building ventilation system	3.1	1
061	Area Radiation Monitoring (ARM) System Alarms / 7		X					AK2.01 - Detectors at each ARM system location	2.6*	1
E03	LOCA Cooldown and Depressurization / 4	X						EK1.3 - Annunciators and conditions indicating signals, and remedial actions associated with the LOCA Cooldown and Depressurization	3.8	1
E03	LOCA Cooldown and Depressurization / 4				X			EA1.2 - Operating behavior characteristics of the facility	3.9	1
E05	Loss of Secondary Heat Sink / 4				X			EA1.3 - Desired operating results during abnormal and emergency situations	4.2	1
E16	High Containment Radiation / 9						X	2.4.41 - Knowledge of the emergency action level thresholds and classifications.	4.1	1

K/A Category Totals: 3 3 3 3 3 1

Group Point Total: 16

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Sep. 05 2002 02:07PM P15

# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

## Emergency and Abnormal Plant Evolutions - Tier 1 / Group 3

Form ES-401-3

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
056	Loss of Offsite Power / 6					X		AA2.18 - Reactor coolant temperature, pressure, and PZR level recorders	4.0	1
E15	Containment Flooding / 5					X		EA2.1 - Facility conditions and selection of appropriate procedures during abnormal and emergency operations	3.2	1
E15	Containment Flooding / 5	X						EK1.1 - Components, capacity, and function of emergency systems	3.0	1

K/A Category Totals: 1 0 0 0 2 0

Group Point Total: 3

*Replume*  
*2/5 sampled* (3)

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Sep. 05 2002 02:08PM P16



# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

Form ES-401-3

ES - 401

## Plant Systems - Tier 2 / Group 1

Sys/Ex #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
001	Control Rod Drive System / 1			X									K3.01 - CVCS	3.0*	1
001	Control Rod Drive System / 1					X							K5.30 - Effects of fuel burnout on reactivity in the core	3.1	1
003	Reactor Coolant Pump System (RCPS) / 4							X					A1.03 - RCP motor stator winding temperatures	2.6	1
004	Chemical and Volume Control System (CVCS) / 1											X	2.4.1 - Knowledge of EOP entry conditions and immediate action steps.	4.6	1
004	Chemical and Volume Control System (CVCS) / 1									X			A3.07 - S/G level and pressure	3.3	1
013	Engineered Safety Features Actuation System (ESFAS) / 2											X	2.4.47 - Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material.	3.7	1
013	Engineered Safety Features Actuation System (ESFAS) / 2				X								K4.01 - SIS reset	4.3	1
017	In-Core Temperature Monitor (ITM) System / 7						X						K6.01 - Sensors and detectors	3.0	1
022	Containment Cooling System (CCS) / 5		X										K2.01 - Containment cooling fans	3.1	1
025	Ice Condenser System / 5					X							K5.02 - Heat transfer	2.8*	1

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Sep. 05 2002 02:08PM P17

13/17

OK

(19)

Printed: 09/05/2002

## FWR SRO Examination Outline

Facility: Sequoyah Nuclear Plant

ES - 401		Plant Systems - Tier 2 / Group 1												Form ES-401.3	
Sys/Ex #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
059	Main Feedwater (MFW) Syst / 4	X											K1.04 - S/GS water level control system	3.4	1
059	Main Feedwater (MFW) Syst / 4										X		A4.01 - MFW turbine trip indication	3.1*	1
061	Auxiliary / Emergency Feedwater (AFW) System / 4		X										K2.01 - AFW system MOVs	3.3	1
061	Auxiliary / Emergency Feedwater (AFW) System / 4						X						K6.01 - Controllers and positioners	2.8*	1
063	D.C. Electrical Distribution System / 6				X								K4.04 - Trips	2.9*	1
063	D.C. Electrical Distribution System / 6								X				A2.01 - Grounds	3.2*	1
068	Liquid Radwaste System (LRWS) / 9									X			A3.02 - Automatic isolation	3.6	1
071	Waste Gas Disposal System (WGDS) / 9							X					A1.06 - Ventilation system	2.8	1
072	Area Radiation Monitoring (ARM) System / 7							X					A1.01 - Radiation levels	3.6	1

Group Point Total: 19

K/A Category: Totals: 1 2 1 2 2 2 2 3 1 2 1 2

# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

Form ES-401-3

ES - 401

## Plant Systems - Tier 2 / Group 2

Sys/Ex #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
006	Emergency Core Cooling System (ECCS) / 2						X						K6.19 - HPI/LPI systems (mode change)	3.9	1
006	Emergency Core Cooling System (ECCS) / 2							X					A1.07 - Pressure, high and low	3.6	1
010	Pressurizer Pressure Control System (PZR PCS) / 3								X				A2.02 - Spray valve failures	3.9	1
010	Pressurizer Pressure Control System (PZR PCS) / 3											X	2.4.47 - Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material.	3.7	1
011	Pressurizer Level Control System (PZR LCS) / 2											X	2.1.6 - Ability to supervise and assume a management role during plant transients and upset conditions.	4.3	1
012	Reactor Protection System / 7						X						K6.07 - Core protection calculator	3.2*	1
016	Non-Nuclear Instrumentation System (NNIS) / 7	X											K1.01 - RCS	3.4*	1
016	Non-Nuclear Instrumentation System (NNIS) / 7									X			A3.02 - Relationship between meter readings and actual parameter value	2.9*	1
034	Fuel Handling Equipment System (FHES) / 8				X								K4.02 - Fuel movement	3.3	1
034	Fuel Handling Equipment System (FHES) / 8							X					A1.02 - Water level in the refueling canal	3.7	1

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:13PM P2

## PWR SRO Examination Outline

Facility: Sequoyah Nuclear Plant

Form ES-401-3

Plant Systems - Tier 2 / Group 2															
ES - 401		Plant Systems - Tier 2 / Group 2													
Sys/Ex #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	C	K/A Topic	Imp.	Points
035	Steam Generator System (S/GS) / 4					X							K5.01 - Effect of secondary parameters, pressure, and temperature on reactivity	3.9	1
039	Main and Reheat Steam System (MRSS) / 4			X									K3.04 - MFW pumps	2.6*	1
062	A.C. Electrical Distribution System / 6										X		A4.03 - Synchroscope, including an understanding of running and incoming voltages	2.9	1
064	Emergency Diesel Generator (ED/G) System / 6		X										K2.02 - Fuel oil pumps	3.1	1
075	Circulating Water System / 8	X											K1.01 - SWS	2.5	1
079	Station Air System (SAS) / 8				X								K4.01 - Cross-connect with IAS	3.2	1
103	Containment System / 5									X			A3.01 - Containment isolation	4.2	1

Facility: Sequoyah Nuclear Plant

Group Point Total: 17

K/A Category Totals: 2 1 1 1 2 1 2 2 2 2 1 2 1 2

17

13/21

# PWR SRO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

Form ES-401-3

ES - 401

## Plant Systems - Tier 2 / Group 3

Sys/Ex #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
007	Pressurizer Relief Tank/Quench Tank System (PRTS) / 5											X	2.1.10 - Knowledge of conditions and limitations in the facility license.	3.9	1
007	Pressurizer Relief Tank/Quench Tank System (PRTS) / 5							X					A1.01 - Maintaining quench tank water level within limits	3.1	1
008	Component Cooling Water System (CCWS) / 8				X								K4.02 - Operation of the surge tank, including the associated valves and controls	2.7	1
078	Instrument Air System (IAS) / 8	X											K1.01 - Sensor air	2.7*	1

K/A Category Totals: 1 0 0 1 0 0 1 0 0 0 1

Group Point Total: 4

*Replac 1*

(4)

$\frac{3}{2}$

*service water  
IA*

*⇒ PSA ?*

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:14PM P4

# Generic Knowledge and Abilities Outline (Tier 3)

Printed: 09/05/2002

## PWR SRO Examination Outline

Form ES-401-5

**Facility:** Sequoyah Nuclear Plant

Generic Category	KA	KA Topic	Imp.	Points
<b>Conduct of Operations</b>	2.1.7	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.	4.4	1
	2.1.10	Knowledge of conditions and limitations in the facility license.	3.9	1
	2.1.22	Ability to determine Mode of Operation.	3.3	1
	2.1.24	Ability to obtain and interpret station electrical and mechanical drawings.	3.1	1
<b>Category Total:</b>			<b>4</b>	
<b>Equipment Control</b>	2.2.4	(multi-unit) Ability to explain the variations in control board layouts, systems, instrumentation and procedural actions between units at a facility.	3.0*	1
	2.2.9	Knowledge of the process for determining if the proposed change, test or experiment increases the probability of occurrence or consequences of an accident during the change, test or experiment.	3.3	1
	2.2.11	Knowledge of the process for controlling temporary changes.	3.4*	1
	2.2.25	Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	3.7	1
<b>Category Total:</b>			<b>4</b>	
<b>Radiation Control</b>	2.3.1	Knowledge of 10 CFR: 20 and related facility radiation control requirements.	3.0	1
	2.3.2	Knowledge of facility ALARA program.	2.9	1
	2.3.3	Knowledge of SRO responsibilities for auxiliary systems that are outside the control room (e.g., waste disposal and handling systems).	2.9	1
	2.3.9	Knowledge of the process for performing a containment purge.	3.4	1
	2.3.11	Ability to control radiation releases.	3.2	1
<b>Category Total:</b>			<b>5</b>	

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:14PM PS

# Generic Knowledge and Abilities Outline (Tier 3)

Printed: 09/05/2002

## PWR SRO Examination Outline

Form ES-401-5

Facility: Sequoyah Nuclear Plant

Generic Category	KA	KA Topic	Imp.	Points
Emergency Procedures/Plan	2.4.4	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.3	1
	2.4.33	Knowledge of the process used track inoperable alarms.	2.8	1
	2.4.39	Knowledge of the RO's responsibilities in emergency plan implementation.	3.1	1
	2.4.45	Ability to prioritize and interpret the significance of each annunciator or alarm.	3.6	1
Category Total:			4	

Generic Total: 17

*initial?*

*Not for SRO only test*

*use on RO*

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:21PM P19

ES-401

## PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

Form ES-401-4

Exam Date: 12/02/2002

Exam Level: RO

Tier	Group	K/A Category Points											Point Total
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	
1. Emergency & Abnormal Plant Evolutions	1	4	3	4				3	2			0	16 ✓
	2	3	5	3				4	1			1	17 ✓
	3	1	1	1				0	0			0	3 ✓
	Totals Tier	8	9	8				7	3			1	36 ✓
2. Plant Systems	1	2	2	1	3	2	2	3	2	2	2	2	23 ✓
	2	2	2	2	2	2	2	2	2	2	1	1	20 ✓
	3	1	0	1	2	0	0	2	1	1	0	0	8 ✓
	Tier Totals	5	4	4	7	4	4	7	5	5	3	3	51 ✓
3. Generic Knowledge And Abilities					Cat 1		Cat 2		Cat 3		Cat 4		
					3		3		3		4		13 ✓

- Note: 1. Ensure that at least two topics from every K/A category are sampled within each tier (i.e., the "Tier Totals" in each K/A category shall not be less than two).
2. Actual point totals must match those specified in the table.
3. Select topics from many systems; avoid selecting more than two or three K/A topics from a given 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 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.
7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings for the RO license level, and the point totals for each system and category. K/As below 2.5 should be justified on the



# PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

## Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-4

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
005	Inoperable/Stuck Control Rod / 1					X		AA2.01 - Stuck or inoperable rod from in-core and ex-core NIS, in-core or loop temperature measurements	3.3	1
015	Reactor Coolant Pump (RCP) Malfunctions / 4		X					AK2.08 - CCWS	2.6	1
024	Emergency Boration / 1				X			AA1.26 - Boric acid storage tank	3.3	1
027	Pressurizer Pressure Control (PZR PCS) Malfunction / 3	X						AK1.02 - Expansion of liquids as temperature increases	2.8	1
040	Steam Line Rupture / 4	X						AK1.01 - Consequences of PTS	4.1	1
051	Loss of Condenser Vacuum / 4			X				AK3.01 - Loss of steam dump capability upon loss of condenser vacuum	2.8*	1
067	Plant Fire on Site / 9					X		AA2.17 - Systems that may be affected by the fire	3.5	1
068	Control Room Evacuation / 8		X					AK2.07 - ED/G	3.3	1
069	Loss of Containment Integrity / 5				X			AA1.03 - Fluid systems penetrating containment	2.8	1

15  
18

OK

(16)

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:16PM P7

# PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

## Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-4

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic	Imp.	Points
074	Inadequate Core Cooling / 4	X						EK1.01 - Methods of calculating subcooling margin	4.3	1
074	Inadequate Core Cooling / 4		X					EK2.02 - PORV	3.9	1
076	High Reactor Coolant Activity / 9			X				AK3.05 - Corrective actions as a result of high fission-product radioactivity level in the RCS	2.9	1
E08	Pressurized Thermal Shock / 4			X				EK3.2 - Normal, abnormal and emergency operating procedures associated with Pressurized Thermal Shock	3.6	1
E09	Natural Circulation Operations / 4				X			EA1.1 - Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features	3.5	1
E10	Natural Circulation with Steam Void in Vessel with/without RVLIS / 4			X				EK3.1 - Facility operating characteristics during transient conditions, including coolant chemistry and the effects of temperature, pressure, and reactivity changes and operating limitations and reasons for these operating characteristics	3.4	1
E14	High Containment Pressure / 5	X						EK1.3 - Annunciators and conditions indicating signals, and remedial actions associated with the High Containment Pressure	3.3	1

K/A Category Totals: 4 3 4 3 2 0

Group Point Total: 16

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PHONE NO. : 423 843 4339

Sep. 05 2002 02:16PM PB

# PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

## Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-4

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
001	Continuous Rod Withdrawal / 1	X						AK1.03 - Relationship of reactivity and reactor power to rod movement	3.9	1
009	Small Break LOCA / 3	X						EK1.01 - Natural circulation and cooling, including reflux boiling	4.2	1
025	Loss of Residual Heat Removal System (RHRS) / 4		X					AK2.05 - Reactor building sump	2.6	1
029	Anticipated Transient Without Scram (ATWS) / 1		X					EK2.06 - Breakers, relays, and disconnects	2.9*	1
037	Steam Generator (S/G) Tube Leak / 3			X				AK3.03 - Comparison of makeup flow and letdown flow for various modes of operation	3.1	1
037	Steam Generator (S/G) Tube Leak / 3				X			AA1.11 - PZR level indicator	3.4	1
038	Steam Generator Tube Rupture (SGTR) / 3			X				EK3.08 - Criteria for securing RCP	4.1	1
058	Loss of DC Power / 6			X				AK3.01 - Use of dc control power by ED/Gs	3.4*	1
059	Accidental Liquid Radwaste Release / 9					X		AA2.05 - The occurrence of automatic safety actions as a result of a high PRM system signal	3.6	1
060	Accidental Gaseous Radwaste Release / 9		X					AK2.02 - Auxiliary building ventilation system	2.7	1

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Sep. 05 2002 02:17PM P9

# PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401 Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2 Form ES-401-4

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Tonic	Imp.	Points
061	Area Radiation Monitoring (ARM) System Alarms / 7		X					AK2.01 - Detectors at each ARM system location	2.5*	1
E01	Radiagnosis / 3				X			EA1.1 - Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features	3.7	1
E01	Radiagnosis / 3						X	2.2.25 - Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	2.5	1
E03	LOCA Cooldown and Depressurization / 4	X						EK1.3 - Annunciators and conditions indicating signals, and remedial actions associated with the LOCA Cooldown and Depressurization	3.5	1
E03	LOCA Cooldown and Depressurization / 4				X			EA1.2 - Operating behavior characteristics of the facility	3.7	1
E04	LOCA Outside Containment / 3		X					EK2.2 - Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility	3.8	1
E05	Loss of Secondary Heat Sink / 4				X			EA1.3 - Desired operating results during abnormal and emergency situations	3.8	1

K/A Category Totals: 3 5 3 4 1 1

Group Point Total: 17

144  
26

17

## PWR RO Examination Outline

Facility: Sequoyah Nuclear Plant

ES - 401

Form ES-401-4

## Emergency and Abnormal Plant Evolutions - Tier 1 / Group 3

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
056	Loss of Offsite Power / 6			X				AK3.01 - Order and time to initiation of power for the load sequencer	3.5	1
E15	Containment Flooding / 5	X						EK1.1 - Components, capacity, and function of emergency systems	2.8	1
E15	Containment Flooding / 5		X					EK2.2 - Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility	2.7	1

K/A Category Totals: 1 1 1 0 0 0

Group Point Total: 3

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PHONE NO. : 423 843 4339

Sep. 05 2002 02:18PM P11

# PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

Plant Systems - Tier 2 / Group 1

Form ES-401-4

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
001	Control Rod Drive System / 1			X									K3.01 - CVCS	2.9*	1
001	Control Rod Drive System / 1					X							K5.30 - Effects of fuel burnout on reactivity in the core	2.9	1
003	Reactor Coolant Pump System (RCPS) / 4				X								K4.02 - Prevention of cold water accidents or transients	2.5	1
003	Reactor Coolant Pump System (RCPS) / 4							X					A1.03 - RCP motor stator winding temperatures	2.6	1
004	Chemical and Volume Control System (CVCS) / 1									X			A3.07 - S/G level and pressure	3.3	1
013	Engineered Safety Features Actuation System (ESFAS) / 2				X								K4.01 - SIS reset	3.9	1
015	Nuclear Instrumentation System / 7								X				A2.03 - Xenon oscillations	3.2	1
017	In-Core Temperature Monitor (ITM) System / 7						X						K6.01 - Sensors and detectors	2.7	1
022	Containment Cooling System (CCS) / 5		X										K2.01 - Containment cooling fans	3.0*	1
022	Containment Cooling System (CCS) / 5											X	2.4.27 - Knowledge of fire in the plant procedure.	3.0	1
025	Ice Condenser System / 5					X							K5.02 - Heat transfer	2.6*	1

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Sep. 05 2002 02:18PM P12

# PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401

Plant Systems - Tier 2 / Group 1

Form ES-401-4

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
025	Ice Condenser System / 5											X	2.2.13 - Knowledge of tagging and clearance procedures.	3.6	1
056	Condensate System / 4	X											K1.03 - MFW	2.6*	1
056	Condensate System / 4								X				A2.04 - Loss of condensate pumps	2.6	1
059	Main Feedwater (MFW) System / 4	X											K1.04 - S/GS water level control system	3.4	1
059	Main Feedwater (MFW) System / 4										X		A4.01 - MFW turbine trip indication	3.1*	1
061	Auxiliary / Emergency Feedwater (AFW) System / 4		X										K2.01 - AFW system MOVs	3.2*	1
061	Auxiliary / Emergency Feedwater (AFW) System / 4						X						K6.01 - Controllers and positioners	2.5	1
068	Liquid Radwaste System (LRS) / 9									X			A3.02 - Automatic isolation	3.6	1
068	Liquid Radwaste System (LRS) / 9				X								K4.01 - Safety and environmental precautions for handling hot, acidic, and radioactive liquids	3.4	1
071	Waste Gas Disposal System (WGDS) / 9							X					A1.06 - Ventilation system	2.5	1
071	Waste Gas Disposal System (WGDS) / 9										X		A4.26 - Authorized waste gas release, conducted in compliance with radioactive gas discharge permit	3.1	1

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:19PM P13

PWR RO Examination Outline

Facility: Sequoyah Nuclear Plant

Facility: Sequoyah Nuclear Plant		Plant Systems - Tier 2 / Group 1											Form ES-401-4		
ES - 401		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
Sys/Ev #	System / Evolution Name							X					A1.01 - Radiation levels	3.4	1
072	Area Radiation Monitoring (ARM)														
	System / 7														
														Group Point Total: 23	

Group Point Total: 23

K/A Category Totals: 2 2 2 1 3 2 2 2 3 2 2 2 2

14/14  
23  
OK



# PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401		Plant Systems - Tier 2 / Group 2											Form ES-401-4		
Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
006	Emergency Core Cooling System (ECCS) / 2							X					A1.07 - Pressure, high and low	3.3	1
006	Emergency Core Cooling System (ECCS) / 2						X						K6.19 - HPI/LPI systems (mode change)	3.7	1
010	Pressurizer Pressure Control System (PZR PCS) / 3								X				A2.02 - Spray valve failures	3.9	1
012	Reactor Protection System / 7						X						K6.07 - Core protection calculator	2.9*	1
012	Reactor Protection System / 7		X										K2.01 - RPS channels, components, and interconnections	3.3	1
016	Non-Nuclear Instrumentation System (NNIS) / 7	X											K1.01 - RCS	3.4*	1
016	Non-Nuclear Instrumentation System (NNIS) / 7									X			A3.02 - Relationship between meter readings and actual parameter value	2.9*	1
029	Containment Purge System (CPS) / 8							X					A1.02 - Radiation levels	3.4	1
035	Steam Generator System (S/GS) / 4					X							K5.01 - Effect of secondary parameters, pressure, and temperature on reactivity	3.4	1
039	Main and Reheat Steam System (MRSS) / 4			X									K3.04 - MFW pumps	2.5*	1
039	Main and Reheat Steam System (MRSS) / 4					X							K5.05 - Bases for RCS cooldown limits	2.7	1

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:19PM P15

# PWR RO Examination Outline

Facility: Sequoyah Nuclear Plant

Printed: 09/05/2002

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:20PM P16

Form ES-401-4

Plant Systems - Tier 2 / Group 2															
Sys/Ex #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
062	A.C. Electrical Distribution System / 6										X		A4.03 - Synchroscope, including an understanding of running and incoming voltages	2.8	1
063	D.C. Electrical Distribution System / 6				X								K4.04 - Trips	2.6?	1
063	D.C. Electrical Distribution System / 6								X				A2.01 - Grounds	2.5	1
064	Emergency Diesel Generator (ED/G) System / 6		X										K2.02 - Fuel oil pumps	2.8*	1
064	Emergency Diesel Generator (ED/G) System / 6									X			A3.06 - Start and stop	3.3	1
075	Circulating Water System / 8	X											K1.01 - SWS	2.5	1
079	Station Air System (SAS) / 8				X								K4.01 - Cross-connect with IAS	2.9	1
079	Station Air System (SAS) / 8											X	2.1.1 - Knowledge of conduct of operations requirements.	3.7	1
086	Fire Protection System (FPS) / 8			X									K3.01 - Shutdown capability with redundant equipment	2.7	1

Group Point Total: 20

K/A Category Totals: 2 2 2 2 2 2 2 2 2 2 2 1 1

13/20

# PWR RO Examination Outline

Printed: 09/05/2002

Facility: Sequoyah Nuclear Plant

ES - 401		Plant Systems - Tier 2 / Group 3											Form ES-401-4		
Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
007	Pressurizer Relief Tank/Quench Tank System (PRTS) / 5							X					A1.01 - Maintaining quench tank water level within limits	2.9	1
008	Component Cooling Water System (CCWS) / 8				X								K4.02 - Operation of the surge tank, including the associated valves and controls	2.9	1
008	Component Cooling Water System (CCWS) / 8								X				A2.04 - PRMS alarm	3.3	1
034	Fuel Handling Equipment System (FHES) / 8				X								K4.02 - Fuel movement	2.5	1
034	Fuel Handling Equipment System (FHES) / 8							X					A1.02 - Water level in the refueling canal	2.9	1
078	Instrument Air System (IAS) / 8	X											K1.01 - Sensor air	2.8*	1
078	Instrument Air System (IAS) / 8			X									K3.03 - Cross-tied units	3.0	1
103	Containment System / 5									X			A3.01 - Containment isolation	3.9	1

K/A Category Totals: 1 0 1 2 0 0 2 1 1 0 0

Group Point Total: 8

8

5/11

FROM : SEQUOYAH OPERATOR TRAINING

PHONE NO. : 423 843 4339

Sep. 05 2002 02:20PM P17

## PWR RO Examination Outline

Form ES-401-5

Facility: Sequoyah Nuclear Plant

Generic Category	KA	KA Topic	Imp.	Points
Conduct of Operations	2.1.16	Ability to operate plant phone, paging system, and two-way radio.	2.9	1
	2.1.24	Ability to obtain and interpret station electrical and mechanical drawings.	2.8	1
	2.1.31	Ability to locate control room switches, controls and indications and to determine that they are correctly reflecting the desired plant lineup.	4.2	1
	Category Total:			3
Equipment Control	2.2.4	(multi-unit) Ability to explain the variations in control board layouts, systems, instrumentation and procedural actions between units at a facility.	2.8	1
	2.2.11	Knowledge of the process for controlling temporary changes.	2.5	1
	2.2.26	Knowledge of refueling administrative requirements.	2.5	1
	Category Total:			3
Radiation Control	2.3.9	Knowledge of the process for performing a containment purge.	2.5	1
	2.3.10	Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.	2.9	1
	2.3.11	Ability to control radiation releases.	2.7	1
	Category Total:			3
Emergency Procedures/Plan	2.4.4	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.0	1
	2.4.5	Knowledge of the organization of the operating procedures network for normal, abnormal, and emergency evolutions.	2.9	1
	2.4.20	Knowledge of operational implications of EOP warnings, cautions, and notes.	3.3	1
	2.4.39	Knowledge of the RO's responsibilities in emergency plan implementation.	3.3	1
	Category Total:			4

Generic Total: 13

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