

Facility: Callaway		Date of Exam: August 2002						Exam Level: SRO					
Tier	Group	K/A Category Points											Point Total
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	
1. Emergency & Abnormal Plant Evolutions	1	5	4	3				4	3			5	24
	2	2	1	3				2	6			2	16
	3	0	0	0				1	0			2	3
	Tier Totals	7	5	6				7	9			9	43
2. Plant Systems	1	2	1	0	2	2	2	2	2	1	1	4	19
	2	1	1	2	1	0	1	1	4	2	2	2	17
	3	0	0	2	0	0	0	0	1	0	0	1	4
	Tier Totals	3	2	4	3	2	3	3	7	3	3	7	40
3. Generic Knowledge and Abilities					Cat 1		Cat 2		Cat 3		Cat 4		17
					5		4		3		5		
<p>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).</p> <p>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 <math>\pm 1</math> from that specified in the table based on NRC revisions. The final exam must total 100 points.</p> <p>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.</p> <p>4. Systems/evolutions within each group are identified on the associated outline.</p> <p>5. The shaded areas are not applicable to the category/tier.</p> <p>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.</p> <p>7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings for the SRO license level, and the point totals for each system and category. K/As below 2.5 should be justified on the basis of plant-specific priorities. Enter the tier totals for each category in the table above.</p>													

Callaway 2002 SRO Examination Outline  
Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-3

ES-401	E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
000001	Continuous Rod Withdrawal / 1			X				AK3.02 Tech Spec Limits For Control Rods	4.3	S001
000003	Dropped Control Rod / 1	X						AK1.11 Long Term Effect Of Dropped Rod	3.5	B017
000005	Inoperable / Stuck Control Rod / 1				X			AA1.01 Inoperable Rod - Malfunctioning Coil Currents	3.4	B001
000011	Large Break LOCA / 3				X			EA1.13 Manually Align ECCS Components (IPE/PRA)	4.2	B021
W/E04	LOCA Outside Containment / 3	X						EK1.2 Precaution During Valve Strokes In ECA-1.2	4.2	B022
W/E02	SI Termination / 3		X					EK2.2 Primary Coolant Indication For SI Termination	3.9	B024
000015/17	RCP Malfunctions / 4						X	2.1.32 RCP Starting Limitations	3.8	B002
W/E09&E10	Natural Circ. / 4	X						EK1.3 Natural Circulation Indications (IPE/PRA)	3.6	B003
000024	Emergency Boration / 1						X	2.4.4 OTO-ZZ-00003 Entry Conditions	4.3	B004
000026	Loss of Component Cooling Water / 8			X				AK3.03 Loss of CCW Pump - Operator Actions	4.2	B005
000029	Anticipated Transient w/o Scram / 1						X	2.4.16 ATWS Coincident With SI	4.0	S002
000040 (W/E12)	Steam Line Rupture – Excessive Heat Transfer / 4	X						AK1.06 Steam Line Break Outside CTMT	3.8	B007
W/E08	RCS Overcooling - PTS / 4				X			EA1.3 RCS Post-Soak C/D Limits Following PTS	4.0	B008
000051	Loss of Condenser Vacuum / 4			X				AK3.01 Loss of Steam Dumps With Loss Of Vacuum	3.1	B009
000055	Station Blackout / 6	X						EK1.01 Battery Discharge Rate (IPE/PRA)	3.7	B010
000057	Loss of Vital AC Elec. Inst. Bus / 6					X		AA2.19 Auto Actions On Loss Of NN02	4.3	B011
000059	Accidental Liquid Radwaste Rel. / 9					X		AA2.02 LRW Release Permit	3.9	S003
000062	Loss of Nuclear Service Water / 4						X	2.2.25 ESW Tech Spec Bases	3.7	S004

Callaway 2002 SRO Examination Outline  
Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-3

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#					
000067 Plant Fire On-site / 9				X			AA1.08 Fire In NB01 Switchgear	3.7	B012					
000068 Control Room Evac. / 8		X					AK2.02 Activating RPS From Outside The Control Room	3.9	B013					
000069 Loss of CTMT Integrity / 5 (W/E14)						X	2.1.12 CTMT Integrity Tech Spec	4.0	S005					
000074 Inad. Core Cooling / 4 (W/E06&E07)		X					EK2.1 Manual Actions On High CTMT Pressure	3.7	B014					
000076 High Reactor Coolant Activity / 9		X					EK2.2 RCP Requirements For Inadequate Core Cooling	4.1	B015					
					X		AA2.02 High RCS Activity Sampling Requirements	3.4	B016					
K/A Category Point Totals:							5	4	3	4	3	5	Group Point Total:	24

Callaway 2002 SRO Examination Outline  
Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-3

ES-401	E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
000007	Reactor Trip – Stabilization – Recovery / 1	X						EK1.05 How Long For Source Ranges To Energize On Rx Trip	3.8	B018
000008	Pressurizer Vapor Space Accident / 3		X					AK2.02 Indication Of Stuck Open Pzr Safety	2.7	B019
000009	Small Break LOCA / 3				X			EA1.04 Indications Of Small LOCA In CVCS (IPE/PRA)	3.5	B020
W/E03	LOCA Cooldown-Depress. / 4							EK1.2 ES-1.2 RNO Actions	4.1	B023
W/E11	Loss of Emergency Coolant Recirc / 4					X		EA2.1 Transition To Loss Of Emergency Coolant Recirc (IPE/PRA)	4.2	S006
000022	Loss of Reactor Coolant Makeup / 2			X				AK3.02 Valve Closure In Charging Line	3.8	B025
000025	Loss of RHR System / 4				X			AA1.02 Loss Of RHR At Mid-Loop	3.9	B026
000027	Pressurizer Pressure Control System Malfunction / 3					X		AA2.16 Pzr Pressure Instrument Fails Low	3.9	B006
000032	Loss of Source Range NI / 7						X	2.4.11 Loss Of Source Range Due To P-10	3.6	B027
000033	Loss of Intermediate Range NI / 7					X		AA2.02 Indication Of IR Channel Failure	3.6	B028
000037	Steam Generator Tube Leak / 3						X	2.4.11 Quantify S/G Tube Leak	3.6	B029
000038	Steam Generator Tube Rupture / 3			X				EK3.06 Ruptured S/G Depressurization Methods (IPE/PRA)	4.5	B030
000054	Loss of Main Feedwater / 4			X				AK3.04 Immediate Actions For MFP Trip	4.6	B031
000058	Loss of DC Power / 6					X		AA2.03 Loss Of DC Power For Failed Flash	3.9	B032
W/E16	High Containment Radiation / 9					X		EA2.1 Response To High CTMT Radiation	3.3	S007
000065	Loss Of Instrument Air / 8					X		AA2.08 Failure Mode Of EFHV43/44	3.3	B034
K/A Category Point Totals:		2	1	3	2	6	2	Group Point Total:		16

Callaway 2002 SRO Examination Outline  
Emergency and Abnormal Plant Evolutions - Tier 1 / Group 3

ES-401	E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
000028	Pressurizer Level Malfunction / 2				X			AA1.02 Effect Of Pzr Level Channel Failure On RMCS	3.4	B033
000036	Fuel Handling Accident / 8						X	2.2.25 Fuel Handling Tech Spec Bases	3.7	S008
000056	Loss Of Off-Site Power / 6						X	2.4.21 CSF Status During Loss Of Off-Site Power	4.3	S009
K/A Category Point Totals:		0	0	0	1	0	2	Group Point Total:		3

Callaway 2002 SRO Examination Outline  
Plant Systems - Tier 2 / Group 1

Form ES-401-3

ES-401	Callaway 2002 SRO Examination Outline Plant Systems - Tier 2 / Group 1										Form ES-401-3		
E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3/A4	G	K/A Topic(s)	Imp.	Q#
001 Control Rod Drive				X							K5.04 Rod Insertion Limit / P/A Converter Malfunction	4.7	B035
003 Reactor Coolant Pump						X					A1.07 Securing RCP At Power	3.4	B036
004 Chemical and Volume Control					X						K6.13 Boration Control Malfunction	3.3	B037
013 Engineered Safety Features Actuation							X				A2.01 ESFAS Response To LOCA	4.8	B038
014 Rod Position Indication							X				A2.03 Multiple Dropped Rods	4.1	S010
015 Nuclear Instrumentation										X	2.1.12 QPTR Tech Spec	4.0	S011
017 In-core Temperature Monitor				X							K4.01 CET Input To Subcooling Monitor	3.7	B039
022 Containment Cooling		X									K2.01 Containment Coolers Power Supply	3.1	B040
026 Containment Spray									X		A4.01 CTMT Cooler Operation On SI	3.6	B041
056 Condensate	X								X		A3.01 CTMT Spray Pump Response To LOCA	4.5	B053
059 Main Feedwater	X										K1.03 MFW Temperature Response To LP Htr Isolation	2.6	B042
061 Auxiliary/Emergency Feedwater							X				K1.04 S/G Water Level Control	3.4	B043
063 DC Electrical Distribution											A1.07 MFP Speed Change Due To AEPT508 Failure	2.6	B044
068 Liquid Radwaste					X						K5.01 Relationship Between AFW Flow And RCS heat Transfer	3.9	B045
										X	2.2.25 CST Tech Spec Bases	3.7	S012
										X	2.2.22 125 VDC Tech Spec	4.1	S013
						X					K6.10 LRW Discharge With Inoperable Monitor	2.9	B046

ES-401		Callaway 2002 SRO Examination Outline										Form ES-401-3	
		Plant Systems - Tier 2 / Group 1											
E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3/A4	G	K/A Topic(s)	Imp.	Q#
071 Waste Gas Disposal				X							K4.04 Automatic Action On High Radiation	3.4	B047
072 Area Radiation Monitoring										X	2.2.22 Fuel Handling ARM Required By FSAR	4.1	B048
K/A Category Totals:	2	1	0	2	2	2	2	2	1	1	4	Group Point Total: 19	

Callaway 2002 SRO Examination Outline  
Plant Systems - Tier 2 / Group 2

Form ES-401-3

ES-401	Callaway 2002 SRO Examination Outline Plant Systems - Tier 2 / Group 2													Form ES-401-3
E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
002 Reactor Coolant									X			A3.03 Master Pzr Press Controller Setting	4.6	B049
006 Emergency Core Cooling										X		A4.02 ECCS Valve Interlocks	3.8	B050
010 Pressurizer Pressure Control						X						A1.08 Spray Nozzle $\Delta$ T Limits	3.3	B051
011 Pressurizer Level Control							X					A2.03 Response To Pzr Level Malfunction	3.9	S014
012 Reactor Protection							X					A2.01 Multiple Rx Prot Channel Failures	3.6	S015
016 Non-nuclear Instrumentation			X									K3.03 Steam Dump Response To ABPT507 Failure	3.1	B052
029 Containment Purge							X					A2.04 HP Sampling Requirements For Release Permit	3.2	S016
033 Spent Fuel Pool Cooling				X								K4.05 SFP Dilution - Shutdown Margin	3.3	B054
034 Fuel Handling Equipment								X				A2.02 Dropped Fuel Cask	3.9	S017
035 Steam Generator					X							K6.01 Inadvertent Main Steam Line Isolation	3.6	B055
039 Main and Reheat Steam			X									K3.04 MFW Pump Discharge Pressure During Transient	2.6	B056
062 AC Electrical Distribution		X										K2.01 Loss Of Startup Transformer	3.4	B057
064 Emergency Diesel Generator								X				A3.07 Load Sequencing During SI	3.7	B058
073 Process Radiation Monitoring	X											K1.01 Response To CCW Rad Mon Alarm	3.9	B059
079 Station Air										X		A4.01 Loss Of Instrument Air Pressure	2.7	B060
086 Fire Protection											X	2.4.27 Actions Upon Discovery Of Fire	3.5	B061
103 Containment											X	2.1.33 Loss Of CTMT Integrity	4.0	S018
K/A Category Totals:	1	1	2	1	0	1	1	4	2	2	2	Group Point Total:		17





Facility: Callaway		Date of Exam: August 2002						Exam Level: RO					
Tier	Group	K/A Category Points											Point Total
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	
1. Emergency & Abnormal Plant Evolutions	1	3	3	2				3	3			2	16
	2	4	2	3				3	2			3	17
	3	0	0	1				1	1			0	3
	Tier Totals	7	5	6				7	6			5	36
2. Plant Systems	1	2	1	1	4	3	3	2	3	2	1	1	23
	2	1	1	4	3	1	1	1	1	3	3	1	20
	3	0	1	2	0	0	0	1	1	1	1	1	8
	Tier Totals	3	3	7	7	4	4	4	5	6	5	3	51
3. Generic Knowledge and Abilities					Cat 1		Cat 2		Cat 3		Cat 4		13
					4		4		2		3		
<p>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).</p> <p>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 <math>\pm 1</math> from that specified in the table based on NRC revisions. The final exam must total 100 points.</p> <p>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.</p> <p>4. Systems/evolutions within each group are identified on the associated outline.</p> <p>5. The shaded areas are not applicable to the category/tier.</p> <p>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.</p> <p>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 basis of plant-specific priorities. Enter the tier totals for each category in the table above.</p>													

Callaway 2002 RO Examination Outline  
Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-4

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
000005 Inoperable / Stuck Control Rod / 1				X			AA1.01 Inoperable Rod - Malfunctioning Coil Currents	3.6	B001
000015/17 RCP Malfunctions / 4						X	2.1.32 RCP Starting Limitations	3.4	B002
W/E09&E10 Natural Circ. / 4	X						EK1.3 Natural Circulation Indications (IPE/PRA)	3.3	B003
000024 Emergency Boration / 1						X	2.4.4 OTO-ZZ-00003 Entry Conditions	4.0	B004
000026 Loss of Component Cooling Water / 8			X				AK3.03 Loss of CCW Pump - Operator Actions	4.0	B005
000027 Pressurizer Pressure Control System Malfunction / 3					X		AA2.16 Pzr Pressure Instrument Fails Low	3.6	B006
000040 (W/E12) Steam Line Rupture – Excessive Heat Transfer / 4	X						AK1.06 Steam Line Break Outside CTMT	3.7	B007
W/E08 RCS Overcooling - PTS / 4				X			EA1.3 RCS Post-Soak C/D Limits Following PTS	3.6	B008
000051 Loss of Condenser Vacuum / 4			X				AK3.01 Loss of Steam Dumps With Loss Of Vacuum	2.8	B009
000055 Station Blackout / 6	X						EK1.01 Battery Discharge Rate (IPE/PRA)	3.3	B010
000057 Loss of Vital AC Elec. Inst. Bus / 6					X		AA2.19 Auto Actions On Loss Of NN02	4.0	B011
000067 Plant Fire On-site / 9				X			AA1.08 Fire In NB01 Switchgear	3.4	B012
000068 Control Room Evac. / 8		X					AK2.02 Activating RPS From Outside The Control Room	3.7	B013
000069 (W/E14) Loss of CTMT Integrity / 5		X					EK2.1 Manual Actions On High CTMT Pressure	3.4	B014
000074 (W/E06&E07) Inad. Core Cooling / 4		X					EK2.2 RCP Requirements For Inadequate Core Cooling	3.8	B015
000076 High Reactor Coolant Activity / 9					X		AA2.02 High RCS Activity Sampling Requirements	2.8	B016
K/A Category Point Totals:	3	3	2	3	3	2	Group Point Total:		16

Callaway 2002 RO Examination Outline  
Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-4

ES-401	E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
000003	Dropped Control Rod / 1	X						AK1.11 Long Term Effect Of Dropped Rod	2.5	B017
000007	Reactor Trip – Stabilization – Recovery / 1	X						EK1.05 How Long For Source Ranges To Energize On Rx Trip	3.3	B018
000008	Pressurizer Vapor Space Accident / 3		X					AK2.02 Indication Of Stuck Open Pzr Safety	2.7	B019
000009	Small Break LOCA / 3				X			EA1.04 Indications Of Small LOCA In CVCS (IPE/PRA)	3.7	B020
000011	Large Break LOCA / 3				X			EA1.13 Manually Align ECCS Components (IPE/PRA)	4.1	B021
W/E04	LOCA Outside Containment / 3	X						EK1.2 Precaution During Valve Strokes In ECA-1.2	3.5	B022
W/E03	LOCA Cooledown/Depress. / 4	X						EK1.2 ES-1.2 RNO Actions	3.6	B023
W/E02	SI Termination / 3		X					EK2.2 Primary Coolant Indication For SI Termination	3.5	B024
000022	Loss of Reactor Coolant Makeup / 2			X				AK3.02 Valve Closure In Charging Line	3.5	B025
000025	Loss of RHR System / 4				X			AA1.02 Loss Of RHR At Mid-Loop	3.8	B026
000029	Anticipated Transient w/o Scram / 1						X	2.4.1 ATWS Immediate Actions	4.3	R001
000032	Loss of Source Range NI / 7						X	2.4.11 Loss Of Source Range Due To P-10	3.4	B027
000033	Loss of Intermediate Range NI / 7					X		AA2.02 Indication Of IR Channel Failure	3.3	B028
000037	Steam Generator Tube Leak / 3						X	2.4.11 Quantify S/G Tube Leak	3.4	B029
000038	Steam Generator Tube Rupture / 3			X				EK3.06 Ruptured S/G Depressurization Methods (IPE/PRA)	4.2	B030
000054	Loss of Main Feedwater / 4			X				AK3.04 Immediate Actions For MFP Trip	4.4	B031
000058	Loss of DC Power / 6					X		AA2.03 Loss Of DC Power For Field Flash	3.5	B032
K/A Category Point Totals:		4	2	3	3	2	3	Group Point Total:		17

Callaway 2002 RO Examination Outline  
Emergency and Abnormal Plant Evolutions - Tier 1 / Group 3

ES-401	E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
000028	Pressurizer Level Malfunction / 2			X				AA1.02 Effect Of Pzr Level Channel Failure On RMCS	3.4	B033
000036	Fuel Handling Accident / 8		X					AK3.03 Actions On Decreasing Refuel Pool Level	3.7	R002
000065	Loss Of Instrument Air / 8				X			AA2.08 Failure Mode Of EFHV43/44	2.9	B034
K/A Category Point Totals:		0	0	1	1	1	0	Group Point Total:		3

Callaway 2002 RO Examination Outline  
Plant Systems - Tier 2 / Group 1

Form ES-401-4

E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
001 Control Rod Drive			X									K4.23 Rod Motion Inhibit	3.4	R003
003 Reactor Coolant Pump		X			X							K5.04 Rod Insertion Limit / P/A Converter Malfunction	4.3	B035
004 Chemical and Volume Control						X						K3.04 Rx Trip Due To Loss Of RCP	3.9	R004
013 Engineered Safety Features Actuation					X			X				A1.07 Securing RCP At Power	3.4	B036
												K5.20 Reactivity Effect Of Boration	3.6	R005
						X						K6.13 Boration Control Malfunction	3.1	B037
								X				A2.01 ESFAS Response To LOCA	4.6	B038
									X			A3.02 ESFAS Status Panel Indication	4.1	R006
015 Nuclear Instrumentation			X									K4.07 Source Range Permissive	3.7	R007
017 In-core Temperature Monitor				X				X				A2.02 SR Discriminator Failure	3.1	R008
022 Containment Cooling		X										K4.01 CET Input To Subcooling Monitor	3.4	B039
					X							K6.01 Thermocouple Failures	2.7	R009
												K2.01 Containment Coolers Power Supply	3.0	B040
056 Condensate	X									X		A4.01 CTMT Cooler Operation On SI	3.6	B041
												K1.03 MFW Temperature Response To LP Htr Isolation	2.6	B042
059 Main Feedwater	X							X				A2.04 Trip Of All Condensate Pumps	2.6	R010
							X					K1.04 S/G Water Level Control	3.4	B043
												A1.07 MFP Speed Change Due To AEPT508 Failure	2.5	B044

Callaway 2002 RO Examination Outline  
 Plant Systems - Tier 2 / Group 1

Form ES-401-4

E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
061 Auxiliary/Emergency Feedwater				X								K5.01 Relationship Between AFW Flow And RCS Heat Transfer	3.6	B045
068 Liquid Radwaste					X				X			A3.01 AMSAC Actuation Of AFW	4.2	R011
071 Waste Gas Disposal												K6.10 LRW Discharge With Inoperable Monitor	2.5	B046
072 Area Radiation Monitoring				X								K4.04 Automatic Action On High Radiation	2.9	B047
											X	2.2.22 Fuel Handling ARM Required By FSAR	3.4	B048
<b>K/A Category Totals:</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>Group Point Total:</b>		<b>23</b>

Callaway 2002 RO Examination Outline  
Plant Systems - Tier 2 / Group 2

Form ES-401-4

ES-401

E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
002 Reactor Coolant									X			A3.03 Master Pzr Press Controller Setting	4.4	B049
006 Emergency Core Cooling										X		A4.02 ECCS Valve Interlocks	4.0	B050
010 Pressurizer Pressure Control							X					A1.08 Spray Nozzle $\Delta$ T Limits	3.2	B051
011 Pressurizer Level Control								X				A2.10 Pzr Level Channel Fails High	3.4	R012
012 Reactor Protection										X		A4.06 Operation Of Rx Trip Breakers	4.3	R013
014 Rod Position Indication					X							K5.01 DRPI Data Failure	2.7	R014
016 Non-nuclear Instrumentation			X									K3.03 Steam Dump Response To ABPT507 Failure	3.0	B052
026 Containment Spray									X			A3.01 CTMT Spray Pump Response To LOCA	4.3	B053
029 Containment Purge				X								K4.02 Maintain Negative Pressure In CTMT	2.9	R015
033 Spent Fuel Pool Cooling				X								K4.05 SFP Dilution - Shutdown Margin	3.1	B054
035 Steam Generator										X		K6.01 Inadvertent Main Steam Line Isolation	3.2	B055
039 Main and Reheat Steam			X									K3.04 MFW Pump Discharge Pressure During Transient	2.5	B056
055 Condenser Air Removal			X									K3.01 Vacuum Pump Auto Starts	2.5	R016
062 AC Electrical Distribution		X										K2.01 Loss Of Startup Transformer	3.3	B057
063 DC Electrical Distribution			X									K3.02 Loss Of DC Control Power	3.5	R017
064 Emergency Diesel Generator										X		A3.07 Load Sequencing During SI	3.6	B058



Callaway 2002 RO Examination Outline  
Plant Systems - Tier 2 / Group 2

E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
073 Process Radiation Monitoring	X											K1.01 Response To CCW Rad Mon Alarm	3.6	B059
075 Circulating Water				X								K4.01 Cooling Tower Bypass Valve Operation	2.5	R018
079 Station Air										X		A4.01 Loss Of Instrument Air Pressure	2.7	B060
086 Fire Protection											X	2.4.27 Actions Upon Discovery Of Fire	3.0	B061
K/A Category Totals:	1	1	4	3	1	1	1	1	3	3	1	Group Point Total:		20

Callaway 2002 RO Examination Outline  
Plant Systems - Tier 2 / Group 3

E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
005 Residual Heat Removal							X					A1.03 Isolating CCW To RHR Hx	2.5	R019
007 Pressurizer Relief/Quench Tank								X				A2.05 Impact Of Pressure ↑ On PRT	3.2	R020
008 Component Cooling Water			X									K3.02 Control Rod Response To CCW Dilution	2.9	B062
034 Fuel Handling Equipment											X	2.2.30 RO Responsibility During Core Reload	3.5	R021
045 Main Turbine Generator										X		A4.01 Main Turbine Chest Warming	3.1	R022
076 Service Water		X										K2.08 ESW Valve Power Supplies (IPE/PRA)	3.1	R023
078 Instrument Air											X	K3.02 RHR System Air Operated Valves	3.4	B063
103 Containment												A3.01 Rad Monitor Response To CISA	3.9	R024
K/A Category Point Totals:	0	1	2	0	0	0	1	1	1	1	1	Group Point Total:		8

Plant-Specific Priorities

System / Topic	Recommended Replacement for	Reason	Points
Plant-Specific Priority Total: (limit 10)			

ES-401

Callaway 2002 RO Examination Outline  
Generic Knowledge and Abilities Outline (Tier 3)

Form ES-401-5

Facility: Callaway		Date of Exam: August 2002		Exam RO Level:
Category	K/A #	Topic	Imp.	Q#
Conduct of Operations	2.1.1	License Candidate Requirements In Main CR	3.7	B064
	2.1.11	Minimum Temp For Criticality T/S	3.0	B065
	2.1.18	RO Log Entries	2.9	B066
	2.1.32	Precautions And Limitations For Radwaste Supply	3.4	B067
	2.1.			
	2.1.			
	Total			4
Equipment Control	2.2.11	Continuous Use Procedure Adherence	2.5	B068
	2.2.13	Operation Of Equipment Under Local Control Tag	3.6	B069
	2.2.22	LCO For Refueling Water Storage Tank	3.4	B070
	2.2.33	Rod Bank Overlap	2.5	B071
	2.2.			
	2.2.			
	Total			4
Radiation Control	2.3.1	Radiological Posting	2.6	B072
	2.3.11	Release Termination On Ruptured And Faulted S/G	2.7	B073
	2.3.			
	2.3.			
	2.3.			
	Total			2
Emergency Procedures/ Plan	2.4.1	Reactor Trip Requirements 25%	4.3	R025
	2.4.20	AFW Flow / S/G Level Requirements With Adverse Containment	3.3	B074
	2.4.23	Prioritization Of Emergency Operating Procedures	2.8	B075
	2.4.			
	2.4.			
	Total			3
Tier 3 Point Total RO				13

ES-401

Callaway 2002 SRO Examination Outline  
Generic Knowledge and Abilities Outline (Tier 3)

Form ES-401-5

Facility: Callaway		Date of Exam: August 2002		Exam Level: SRO	
Category	K/A #	Topic	Imp.	Q#	
Conduct of Operations	2.1.1	License Candidate Requirements In Main CR	3.8	B064	
	2.1.11	Minimum Temp For Criticality T/S	3.8	B065	
	2.1.18	RO Log Entries	3.0	B066	
	2.1.26	Confined Space Entry Requirements	2.6	S021	
	2.1.32	Precautions And Limitations For Radwaste Supply	3.8	B067	
	Total			5	
Equipment Control	2.2.11	Continuous Use Procedure Adherence	3.4	B068	
	2.2.13	Operation Of Equipment Under Local Control Tag	3.8	B069	
	2.2.22	LCO For Refueling Water Storage Tank	4.1	B070	
	2.2.33	Rod Bank Overlap	2.9	B071	
	2.2.				
	Total			4	
Radiation Control	2.3.1	Radiological Posting	3.0	B072	
	2.3.10	CTMT Entry Requirements	3.3	S022	
	2.3.11	Release Termination On Ruptured And Faulted S/G	3.2	B073	
	2.3.				
	Total			3	
Emergency Procedures/ Plan	2.4.7	ECA-0.0 Mitigation Strategy	3.8	S023	
	2.4.20	AFW Flow / S/G Level Requirements With Adverse Containment	4.0	B074	
	2.4.22	CSF Implementation Requirements	4.0	S024	
	2.4.23	Prioritization Of Emergency Operating Procedures	3.8	B075	
	2.4.29	Emergency Response Data System	4.0	S025	
	2.4.				
	Total			5	
Tier 3 Point Total SRO				17	