

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 ± 1 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												Form ES-401-3	
Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1													
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	
			X					EK2.1 Manual Actions On High CTMT Pressure	3.7	B014	
000074 Inad. Core Cooling / 4 (W/E06&E07)			X					EK2.2 RCP Requirements For Inadequate Core Cooling	4.1	B015	
000076 High Reactor Coolant Activity / 9						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	X						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	

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Callaway 2002 SRO Examination Outline															Form ES-401-3	
Plant Systems - Tier 2 / Group 1																
ES-401	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	
												X	A4.01 CTMT Cooler Operation On SI	3.6	B041	
	026 Containment Spray									X			A3.01 CTMT Spray Pump Response To LOCA	4.5	B053	
	056 Condensate	X											K1.03 MFW Temperature Response To LP Htr Isolation	2.6	B042	
	059 Main Feedwater	X											K1.04 S/G Water Level Control	3.4	B043	
								X					A1.07 MFP Speed Change Due To AEPT508 Failure	2.6	B044	
	061 Auxiliary/Emergency Feedwater					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	
	063 DC Electrical Distribution											X	2.2.22 125 VDC Tech Spec	4.1	S013	
	068 Liquid Radwaste						X						K6.10 LRW Discharge With Inoperable Monitor	2.9	B046	

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#	
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															Form ES-401-3	
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#		
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 ΔT 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		

ES-401		Callaway 2002 SRO Examination Outline												Form ES-401-3	
		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				A2.02 RHR Overpressure Protection		3.7	S019
008 Component Cooling Water			X									K3.02 Control Rod Response To CCW Dilution		3.1	B062
076 Service Water											X	2.1.12 Inoperable ESW Trains		4.0	S020
078 Instrument Air			X									K3.02 RHR System Air Operated Valves		3.6	B063
K/A Category Point Totals:	0	0	2	0	0	0	0	1	0	0	1	Group Point Total:			4
Plant-Specific Priorities															
System / Topic	Recommended Replacement for										Reason		Points		
Plant-Specific Priority Total: (limit 10)															

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 ± 1 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	
ES-401	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	

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Callaway 2002 RO Examination Outline															Form ES-401-4	
Plant Systems - Tier 2 / Group 1																
ES-401	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	
						X							K5.04 Rod Insertion Limit / P/A Converter Malfunction	4.3	B035	
	003 Reactor Coolant Pump		X										K3.04 Rx Trip Due To Loss Of RCP	3.9	R004	
								X					A1.07 Securing RCP At Power	3.4	B036	
	004 Chemical and Volume Control					X							K5.20 Reactivity Effect Of Boration	3.6	R005	
							X						K6.13 Boration Control Malfunction	3.1	B037	
	013 Engineered Safety Features Actuation								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	
									X				A2.02 SR Discriminator Failure	3.1	R008	
	017 In-core Temperature Monitor				X								K4.01 CET Input To Subcooling Monitor	3.4	B039	
							X						K6.01 Thermocouple Failures	2.7	R009	
	022 Containment Cooling		X										K2.01 Containment Coolers Power Supply	3.0	B040	
											X		A4.01 CTMT Cooler Operation On Si	3.6	B041	
	056 Condensate	X											K1.03 MFW Temperature Response To LP Htr Isolation	2.6	B042	
									X				A2.04 Trip Of All Condensate Pumps	2.6	R010	
	059 Main Feedwater	X											K1.04 S/G Water Level Control	3.4	B043	
								X					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	
ES-401																
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		
									X			A3.01 AMSAC Actuation Of AFW	4.2	R011		
068 Liquid Radwaste						X						K6.10 LRW Discharge With Inoperable Monitor	2.5	B046		
071 Waste Gas Disposal				X								K4.04 Automatic Action On High Radiation	2.9	B047		
072 Area Radiation Monitoring											X	2.2.22 Fuel Handling ARM Required By FSAR	3.4	B048		
K/A Category Totals:	2	1	1	4	3	3	2	3	2	1	1	Group Point Total:		23		

Callaway 2002 RO Examination Outline															Form ES-401-4	
Plant Systems - Tier 2 / Group 2																
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 ΔT 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															Form ES-401-4	
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	3	3	1	Group Point Total:		20		

ES-401		Callaway 2002 RO Examination Outline Plant Systems - Tier 2 / Group 3													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#	
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									X			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