

Form 4.1-BWR Boiling-Water Reactor Examination Outline

Facility: La Salle		K/A Catalog Rev. 3						Rev. 0		Date of Exam: 5/12/2023							
Tier	Group	RO K/A Category Points											SRO-Only Points				
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	Total	A2	G*	Total	
1. Emergency and Abnormal Plant Evolutions	1	3	3	4				3	3				4	20	4	3	7
	2	1	1	1				1	1				1	6	2	1	3
	Tier Totals	4	4	5				4	4				5	26	5	5	10
2. Plant Systems	1	2	2	2	3	2	2	2	2	3	4	2	26	3	2	5	
	2	1	1	1	1	1	2	2	1	0	0	1	11	0	2	1	3
	Tier Totals	3	3	3	4	3	4	4	3	3	4	3	37	5	3	8	
3. Generic Knowledge and Abilities Categories	CO	EC			RC			EM				6	CO	EC	RC	EM	7
	2	2			1			1					2	2	1	2	
4. Theory	Reactor Theory			Thermodynamics								6					
	3			3													
<p>Notes: CO = Conduct of Operations; EC = Equipment Control; RC = Radiation Control; EM = Emergency Procedures/Plan</p> <p>* These systems/evolutions may be eliminated from the sample when Revision 2 of the K/A catalog is used to develop the sample plan.</p> <p>** These systems/evolutions are only included as part of the sample (as applicable to the facility) when Revision 2 of the K/A catalog is used to develop the sample plan.</p>																	

Emergency and Abnormal Plant Evolutions—Tier 1/Group 1 (RO/SRO)

Item #	E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G*	K/A Topic(s)	IR	Q#
1	(295001) (APE 1) PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION						X	(295001) (APE 1) PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION (G2.1.7) CONDUCT OF OPERATIONS Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation (CFR: 41.5 / 43.5 / 45.12 / 45.13)	4.4	1
2	(295003) (APE 3) PARTIAL OR COMPLETE LOSS OF AC POWER		X					(295003AK2.02) Knowledge of the relationship between the (APE 3) PARTIAL OR COMPLETE LOSS OF AC POWER and the following systems or components: (CFR: 41.8 – 41.10 / 41.7 / 45.8) Emergency generators	4.3	2
3	(295004) (APE 4) PARTIAL OR COMPLETE LOSS OF DC POWER	X						(295004AK1.02) Knowledge of the operational implications and/or cause and effect relationships of the following concepts as they apply to the (APE 4) PARTIAL OR COMPLETE LOSS OF DC POWER: (CFR: 41.7 / 45.8) Redundant DC power supplies	3.8	3
4	(295005) (APE 5) MAIN TURBINE GENERATOR TRIP		X					(295005AK2.11) Knowledge of the relationship between the (APE 5) MAIN TURBINE GENERATOR TRIP and the following systems or components: (CFR: 41.7 / 45.8) Recirculation flow control system	3.0	4
5	(295006) (APE 6) SCRAM				X			(295006AA1.05) Ability to operate or monitor the following as they apply to (APE 6) SCRAM: (CFR: 41.7 / 45.6) Neutron monitoring system	3.9	5
6	(295016) (APE 16) CONTROL ROOM ABANDONMENT				X			(295016AA1.10) Ability to operate or monitor the following as they apply to (APE 16) CONTROL ROOM ABANDONMENT: (CFR: 41.7 / 45.6) Safety/relief valves	3.9	6
7	(295018) (APE 18) PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER (CCW)						X	(295018) (APE 18) PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER (CCW) (G2.1.19) CONDUCT OF OPERATIONS Ability to use available indications to evaluate system or component status (CFR: 41.10 / 45.12)	3.9	7
8	(295019) (APE 19) PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR			X				(295019AK3.05) Knowledge of the reasons for the following responses or actions as they apply to (APE 19) PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR: (CFR: 41.5 / 45.6) Leak isolation	3.3	8
9	(295021) (APE 21) LOSS OF SHUTDOWN COOLING		X					(295021AK2.02) Knowledge of the relationship between the (APE 21) LOSS OF SHUTDOWN COOLING and the following systems or components: (CFR: 41.7 / 45.8) Reactor water cleanup	3.2	9
10	(295023) (APE 23) REFUELING ACCIDENTS					X		(295023AA2.03) Ability to determine or interpret the following as they apply to (APE 23) REFUELING ACCIDENTS: (CFR: 41.10 / 43.5 / 45.13) Airborne contamination levels	3.9	10
11	(295024) (EPE 1) HIGH DRYWELL PRESSURE						X	(295024) (EPE 1) HIGH DRYWELL PRESSURE (G2.4.17) EMERGENCY PROCEDURES/PLAN Knowledge of emergency and abnormal operating procedures terms and definitions (CFR: 41.10 / 45.13)	3.9	11
12	(295025) (EPE 2) HIGH REACTOR PRESSURE	X						(295025EK1.05) Knowledge of the operational implications and/or cause and effect relationships of the following concepts as they apply to the (EPE 2) HIGH REACTOR PRESSURE: (CFR: 41.8 – 41.10) Exceeding safety limits	4.6	12

13	(295026) (EPE 3) SUPPRESSION POOL HIGH WATER TEMPERATURE			X			(295026EK3.05) Knowledge of the reasons for the following responses or actions as they apply to (EPE 3) SUPPRESSION POOL HIGH WATER TEMPERATURE: (CFR: 41.5 / 45.6) Reactor SCRAM	3.9	13
14	(295028) (EPE 5) HIGH DRYWELL TEMPERATURE (MARK I AND MARK II ONLY)			X			(295028EK3.03) Knowledge of the reasons for the following responses or actions as they apply to (EPE 5) HIGH DRYWELL TEMPERATURE (MARK I AND MARK II ONLY): (CFR: 41.5 / 45.6) Drywell spray	3.8	14
15	(295030) (EPE 7) LOW SUPPRESSION POOL WATER LEVEL			X			(295030EK3.06) Knowledge of the reasons for the following responses or actions as they apply to (EPE 7) LOW SUPPRESSION POOL WATER LEVEL: (CFR: 41.5 / 45.6) Reactor shutdown/SCRAM	4.0	15
16	(295031) (EPE 8) REACTOR LOW WATER LEVEL					X	(295031) (EPE 8) REACTOR LOW WATER LEVEL (G2.4.49) EMERGENCY PROCEDURES/PLAN Ability to perform without reference to procedures those actions that require immediate operation of system components and controls (CFR: 41.10 / 43.2 / 45.6)	4.6	16
17	(295037) (EPE 14) SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN	X					(295037EK1.04) Knowledge of the operational implications and/or cause and effect relationships of the following concepts as they apply to the (EPE 14) SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN: (CFR: 41.8 – 41.10) Hot shutdown boron weight	3.7	17
18	(295038) (EPE 15) HIGH OFFSITE RADIOACTIVITY RELEASE RATE				X		(295038EA2.04) Ability to determine or interpret the following as they apply to (EPE 15) HIGH OFFSITE RADIOACTIVITY RELEASE RATE: (CFR: 41.10 / 43.5 / 45.13) Source or offsite release	3.8	18
19	(600000) (APE 24) PLANT FIRE ON SITE				X		(600000AA2.07) Ability to determine or interpret the following as they apply to (APE 24) PLANT FIRE ON SITE: (CFR: 41.10 / 43.5 / 45.13) Whether malfunction(s) are due to common-mode electrical failures	3.1	19
20	(700000) (APE 25) GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES			X			(700000AA1.04) Ability to operate or monitor the following as they apply to (APE 25) GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES: (CFR: 41.5 / 41.10 / 45.5 / 45.7 / 45.8) Reactor controls	3.6	20
21	(295016) (APE 16) CONTROL ROOM ABANDONMENT				X		(295016AA2.06) Ability to determine or interpret the following as they apply to (APE 16) CONTROL ROOM ABANDONMENT: (CFR: 41.10 / 43.5 / 45.13) Cooldown Rate	3.7	76
22	(295021) (APE 21) LOSS OF SHUTDOWN COOLING				X		(295021AA2.02) Ability to determine or interpret the following as they apply to (APE 21) LOSS OF SHUTDOWN COOLING: (CFR: 41.10 / 43.5 / 45.13) RHR/shutdown cooling system flow	3.9	77
23	(295023) (APE 23) REFUELING ACCIDENTS				X		(295023AA2.02) Ability to determine or interpret the following as they apply to (APE 23) REFUELING ACCIDENTS: (CFR: 41.10 / 43.5 / 45.13) Fuel pool level	3.8	78
24	(295024) (EPE 1) HIGH DRYWELL PRESSURE				X		(295024EA2.06) Ability to determine or interpret the following as they apply to (EPE 1) HIGH DRYWELL PRESSURE: (CFR: 41.10 / 43.5 / 45.13) Suppression pool temperature	4.0	79

25	(295025) (EPE 2) HIGH REACTOR PRESSURE						X	(295025) (EPE 2) HIGH REACTOR PRESSURE (G2.2.44) EQUIPMENT CONTROL Ability to interpret control room indications to verify the status and operation of a system and understand how operator actions and directives affect plant and system conditions (CFR: 41.5 / 43.5 / 45.12)	4.4	80
26	(295030) (EPE 7) LOW SUPPRESSION POOL WATER LEVEL						X	(295030) (EPE 7) LOW SUPPRESSION POOL WATER LEVEL (G2.1.32) CONDUCT OF OPERATIONS Ability to explain and apply system precautions, limitations, notes, or cautions (CFR: 41.10 / 43.2 / 45.12)	4.0	81
27	(295037) (EPE 14) SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN						X	(295037) (EPE 14) SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN (G2.1.8) CONDUCT OF OPERATIONS Ability to coordinate personnel activities outside the control room (CFR: 41.10 / 43.1 / 45.5 / 45.12 / 45.13)	4.1	82
	(295027) (EPE 4) HIGH CONTAINMENT TEMPERATURE (MARK III CONTAINMENT ONLY) / 5									
K/A Category Totals:		3	3	4	3	3/4	4/3	Group Point Total:		27

(295013) (APE 13) HIGH SUPPRESSION POOL TEMPERATURE. / 5									
(295014) (APE 14) INADVERTENT REACTIVITY ADDITION / 1									
(295017) (APE 17) ABNORMAL OFFSITE RELEASE RATE / 9									
(295020) (APE 20) INADVERTENT CONTAINMENT ISOLATION / 5 & 7									
(295022) (APE 22) LOSS OF CONTROL ROD DRIVE PUMPS / 1									
(295029) (EPE 6) HIGH SUPPRESSION POOL WATER LEVEL / 5									
(295033) (EPE 10) HIGH SECONDARY CONTAINMENT AREA RADIATION LEVELS / 9									
(295036) (EPE 13) SECONDARY CONTAINMENT HIGH SUMP/AREA WATER LEVEL / 5									
K/A Category Totals:	1	1	1	1	1/2	1/1	Group Point Total:		9

Plant Systems—Tier 2/Group 1 (RO/SRO)

Item #	System / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	K/A Topic(s)	IR	Q#
37	(203000) (SF2, SF4 RHR/LPCI) RHR/LPCI: INJECTION MODE							X					(203000A1.07) Ability to predict and/or monitor changes in parameters associated with operation of the (SF2, SF4 RHR/LPCI) RHR/LPCI: INJECTION MODE including: (CFR: 41.5 / 45.5) Motor amps	2.7	27
38	(203000) (SF2, SF4 RHR/LPCI) RHR/LPCI: INJECTION MODE	X											(203000K1.18) Knowledge of the physical connections and/or cause and effect relationships between the (SF2, SF4 RHR/LPCI) RHR/LPCI: INJECTION MODE and the following systems: (CFR: 41.2 to 41.9 / 43.5 / 45.7 to 45.8) Reactor vessel	3.8	28
39	(205000) (SF4 SCS) SHUTDOWN COOLING SYSTEM (RHR SHUTDOWN COOLING MODE)										X		(205000A4.12) Ability to manually operate and/or monitor the (SF4 SCS) SHUTDOWN COOLING SYSTEM (RHR SHUTDOWN COOLING MODE) in the control room: (CFR: 41.7 / 45.5 to 45.8) Recirculation loop temperatures	3.7	29
40	(209001) (SF2, SF4 LPCS) LOW PRESSURE CORE SPRAY SYSTEM									X			(209001A3.01) Ability to monitor automatic operation of the (SF2, SF4 LPCS) LOW PRESSURE CORE SPRAY SYSTEM including: (CFR: 41.7 / 45.7) Valve operation	4.2	30
41	(209002) (SF2, SF4 HPCS) HIGH PRESSURE CORE SPRAY SYSTEM											X	(209002) (SF2, SF4 HPCS) HIGH PRESSURE CORE SPRAY SYSTEM (G2.2.12) EQUIPMENT CONTROL Knowledge of surveillance procedures (CFR: 41.10 / 43.2 / 45.13)	3.7	31
42	(211000) (SF1 SLCS) STANDBY LIQUID CONTROL SYSTEM											X	(211000G2.1.46) (SF1 SLCS) STANDBY LIQUID CONTROL SYSTEM Ability to use integrated control systems to operate plant systems or components (CFR: 41.10 / 45.12 / 45.13)	4.0	32

43	(211000) (SF1 SLCS) STANDBY LIQUID CONTROL SYSTEM						X					(211000K6.06) Knowledge of the effect of the following plant conditions, system malfunctions, or component malfunctions on the (SF1 SLCS) STANDBY LIQUID CONTROL SYSTEM: (CFR: 41.7 / 45.7) Redundant reactivity control system	3.6	33
44	(212000) (SF7 RPS) REACTOR PROTECTION SYSTEM							X				(212000A1.11) Ability to predict and/or monitor changes in parameters associated with operation of the (SF7 RPS) REACTOR PROTECTION SYSTEM including: (CFR: 41.5 / 45.5) Lights and alarms	3.7	34
45	(215003) (SF7 IRM) INTERMEDIATE RANGE MONITOR SYSTEM				X							(215003K4.04) Knowledge of (SF7 IRM) INTERMEDIATE RANGE MONITOR SYSTEM design features and/or interlocks that provide for the following: (CFR: 41.7) Ranging IRMs	3.8	35
46	(215004) (SF7 SRMS) SOURCE RANGE MONITOR SYSTEM								X			(215004A3.04) Ability to monitor automatic operation of the (SF7 SRMS) SOURCE RANGE MONITOR SYSTEM including: (CFR: 41.7 / 45.7) Control rod block status	3.7	36
47	(215005) (SF7 PRMS) AVERAGE POWER RANGE MONITOR/LOCAL POWER RANGE MONITOR								X			(215005A3.05) Ability to monitor automatic operation of the (SF7 PRMS) AVERAGE POWER RANGE MONITOR/LOCAL POWER RANGE MONITOR including: (CFR: 41.7 / 45.7) Flow converter/comparator signals	3.2	37
48	(218000) (SF3 ADS) AUTOMATIC DEPRESSURIZATION SYSTEM				X							(218000K4.02) Knowledge of (SF3 ADS) AUTOMATIC DEPRESSURIZATION SYSTEM design features and/or interlocks that provide for the following: (CFR: 41.7) Allow manual initiation of ADS logic	4.1	38
49	(223002) (SF5 PCIS) PRIMARY CONTAINMENT ISOLATION SYSTEM / NUCLEAR STEAM SUPPLY SHUTOFF							X				(223002A2.05) Ability to (a) predict the impacts of the following on the (SF5 PCIS) PRIMARY CONTAINMENT ISOLATION SYSTEM / NUCLEAR STEAM SUPPLY SHUTOFF and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: (CFR: 41.5 / 45.6) Nuclear boiler instrumentation failures	3.8	39

50	(223002) (SF5 PCIS) PRIMARY ISOLATION SYSTEM / NUCLEAR STEAM SUPPLY SHUTOFF									X		(223002A4.01) Ability to manually operate and/or monitor the (SF5 PCIS) PRIMARY CONTAINMENT ISOLATION SYSTEM / NUCLEAR STEAM SUPPLY SHUTOFF in the control room: (CFR: 41.7 / 45.5 to 45.8) System valve operations	4.2	40
51	(239002) (SF3 SRV) SAFETY RELIEF VALVES									X		(239002K6.02) Knowledge of the effect of the following plant conditions, system malfunctions, or component malfunctions on the (SF3 SRV) SAFETY RELIEF VALVES: (CFR: 41.7 / 45.5 to 45.8) Pneumatics supply	3.8	41
52	(259002) (SF2 RWLCS) REACTOR WATER LEVEL CONTROL SYSTEM	X										(259002K1.07) Knowledge of the physical connections and/or cause and effect relationships between the (SF2 RWLCS) REACTOR WATER LEVEL CONTROL SYSTEM and the following systems: (CFR: 41.2 to 41.9 / 45.7 to 45.8) Rod worth minimizer	2.8	42
53	(217000) (SF2, SF4 RCIC) REACTOR CORE ISOLATION COOLING SYSTEM		X									(217000K2.02) (SF2 RCIC) REACTOR CORE ISOLATION COOLING SYSTEM Knowledge of electrical power supplies to the following: (CFR: 41.7) Initiation/isolation logic	3.7	43
54	(261000) (SF9 SGTS) STANDBY GAS TREATMENT SYSTEM										X	(261000A2.03) Ability to (a) predict the impacts of the following on the (SF9 SGTS) STANDBY GAS TREATMENT SYSTEM and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: (CFR: 41.5 / 43.5 / 45.6) High Train Temperature	2.9	44
55	(262001) (SF6 AC) AC ELECTRICAL DISTRIBUTION		X									(262001K2.02) (SF6 AC) AC ELECTRICAL DISTRIBUTION Knowledge of electrical power supplies to the following: (CFR: 41.7) AC breaker control power	3.7	45
56	(262002) (SF6 UPS) UNINTERRUPTABLE POWER SUPPLY (AC/DC)									X		(262002K5.01) Knowledge of the operational implications or cause and effect relationships of the following concepts as they apply to the (SF6 UPS) UNINTERRUPTABLE POWER SUPPLY (AC/DC): (CFR: 41.5 / 45.3) Static switch/inverter operation	3.3	46

57	(263000) (SF6 DC) DC ELECTRICAL DISTRIBUTION					X						(263000K5.04) Knowledge of the operational implications or cause and effect relationships of the following concepts as they apply to the (SF6 DC) DC ELECTRICAL DISTRIBUTION: (CFR: 41.5 / 45.3) Ground detection	2.9	47
58	(264000) (SF6 EGE) EMERGENCY GENERATORS (DIESEL/JET)									X		(264000A4.01) Ability to manually operate and/or monitor the (SF6 EGE) EMERGENCY GENERATORS (DIESEL/JET) in the control room: (CFR: 41.7 / 45.5 to 45.8) Voltage/frequency	4.1	48
59	(300000) (SF8 IA) INSTRUMENT AIR SYSTEM			X								(300000K3.08) Knowledge of the effect that a loss or malfunction of the (SF8 IA) INSTRUMENT AIR SYSTEM will have on the following systems or system parameters: (CFR: 41.7 / 45.6) Condenser air removal system	2.9	49
60	(400000) (SF8 CCS) COMPONENT COOLING WATER SYSTEM			X								(400000K3.06) Knowledge of the effect that a loss or malfunction of the (SF8 CCS) COMPONENT COOLING WATER SYSTEM will have on the following systems or system parameters: (CFR: 41.7 / 45.6) Recirculation system	3.8	50
61	(510000) (SF4 SWS*) SERVICE WATER SYSTEM									X		(510000A4.02) Ability to manually operate and/or monitor the (SF4 SWS*) SERVICE WATER SYSTEM in the control room: (CFR: 41.7 / 45.5 to 45.8) Valve operations	3.6	51
62	(510000) (SF4 SWS*) SERVICE WATER SYSTEM				X							(510000K4.07) Knowledge of (SF4 SWS*) SERVICE WATER SYSTEM design features and/or interlocks that provide for the following: (CFR: 41.7) Discharge strainer backwashing	2.8	52
63	(215004) (SF7 SRMS) SOURCE RANGE MONITOR SYSTEM										X	(215004) (SF7 SRMS) SOURCE RANGE MONITOR SYSTEM (G2.1.36) CONDUCT OF OPERATIONS Knowledge of procedures and limitations involved in core alterations (CFR: 41.10 / 43.6 / 45.7)	4.1	86

64	(218000) (SF3 ADS) AUTOMATIC DEPRESSURIZATION SYSTEM									X							(218000A2.06) Ability to (a) predict the impacts of the following on the (SF3 ADS) AUTOMATIC DEPRESSURIZATION SYSTEM and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: (CFR: 41.5 / 43.5 / 45.6) ADS initiation signals present	4.3	87
65	(262001) (SF6 AC) AC ELECTRICAL DISTRIBUTION									X							(262001A2.11) Ability to (a) predict the impacts of the following on the (SF6 AC) AC ELECTRICAL DISTRIBUTION and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: (CFR: 41.5 / 43.5 / 45.6) Degraded bus voltages	3.9	88
66	(263000) (SF6 DC) DC ELECTRICAL DISTRIBUTION									X							(263000A2.04) Ability to (a) predict the impacts of the following on the (SF6 DC) DC ELECTRICAL DISTRIBUTION and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: (CFR: 41.5 / 43.5 / 45.6) Station blackout	4.2	89
67	(400000) (SF8 CCS) COMPONENT COOLING WATER SYSTEM															X	(400000) (SF8 CCS) COMPONENT COOLING WATER SYSTEM (G2.4.14) EMERGENCY PROCEDURES/PLAN Knowledge of general guidelines for emergency and abnormal operating procedures usage (CFR: 41.10 / 43.1 / 45.13)	4.5	90
	(206000) (SF2, SF4 HPCI) HIGH PRESSURE COOLANT INJECTION SYSTEM																		
	(207000) (SF4 IC) ISOLATION (EMERGENCY) CONDENSER																		
K/A Category Totals:		2	2	2	3	2	2	2	2/3	3	4	2/2	Group Point Total:				31		

Plant Systems—Tier 2/Group 2 (RO/SRO)

Item #	System / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	K/A Topic(s)	IR	Q#
68	(201003) (SF1 CRDM) CONTROL ROD AND DRIVE MECHANISM			X									(201003K3.01) Knowledge of the effect that a loss or malfunction of the (SF1 CRDM) CONTROL ROD AND DRIVE MECHANISM will have on the following systems or system parameters: (CFR: 41.1-2 / 41.7 / 41.10 / 45.1-6 / 4) Reactor power	4.1	53
69	(245000) (SF4 MTGEN) MAIN TURBINE GENERATOR AND AUXILIARY SYSTEMS							X					(245000A1.03) Ability to predict and/or monitor changes in parameters associated with operation of the (245000) (SF4 MTGEN) MAIN TURBINE GENERATOR AND AUXILIARY SYSTEMS including: (CFR: 41.5 / 45.5) Turbine Valve Position	3.2	54
70	(201006) (SF7 RWMS) ROD WORTH MINIMIZER SYSTEM								X				(201006A2.03) Ability to (a) predict the impacts of the following on the (SF7 RWMS) ROD WORTH MINIMIZER SYSTEM and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: (CFR: 41.5 / 43.5 / 45.6) Rod drift	3.9	55
71	(202001) (SF1, SF4 RS) RECIRCULATION SYSTEM						X						(202001K6.03) Knowledge of the effect of the following plant conditions, system malfunctions, or component malfunctions on the (SF1, SF4 RS) RECIRCULATION SYSTEM: (CFR: 41.7 / 45.7) AC electrical distribution system	3.5	56
72	(214000) (SF7 RPIS) ROD POSITION INFORMATION SYSTEM							X					(214000A1.01) Ability to predict and/or monitor changes in parameters associated with operation of the (SF7 RPIS) ROD POSITION INFORMATION SYSTEM including: (CFR: 41.5 / 45.5) Control rod position	3.8	57
73	(215002) (SF7 RBMS) ROD BLOCK MONITOR SYSTEM				X								(215002K4.03) Knowledge of (SF7 RBMS) ROD BLOCK MONITOR SYSTEM design features and/or interlocks that provide for the following: (CFR: 41.7) Initiation point (30-percent)	3.3	58

74	(226001) (SF5 RHR CSS) RHR/LPCI: CONTAINMENT SPRAY MODE SYSTEM MODE						X					(226001K6.04) Knowledge of the effect of the following plant conditions, system malfunctions, or component malfunctions on the (SF5 RHR CSS) RHR/LPCI: CONTAINMENT SPRAY MODE SYSTEM MODE : (CFR: 41.7 / 45.7) Keep fill system	3.2	59
75	(233000) (SF9 FPCCU) FUEL POOL COOLING/CLEANUP									X		(233000) (SF9 FPCCU) FUEL POOL COOLING/CLEANUP (G2.1.1) CONDUCT OF OPERATIONS Knowledge of conduct of operations requirements (CFR: 41.10 / 43.10 / 45.13)	3.8	60
76	(234000) (SF8 FH) FUEL HANDLING					X						(234000K5.11) Knowledge of the operational implications or cause and effect relationships of the following concepts as they apply to the (SF8 FH) FUEL HANDLING: (CFR: 41.5 / 45.3) Area radiation monitors response to fuel handling event	3.6	61
77	(241000) (SF3 RTPRS) REACTOR/TURBINE PRESSURE REGULATING SYSTEM	X										(241000K1.11) Knowledge of the physical connections and/or cause and effect relationships between the (SF3 RTPRS) REACTOR/TURBINE PRESSURE REGULATING SYSTEM and the following systems: (CFR: 41.2 to 41.9 / 45.7 to 45.8) RPS	4.1	62
78	(272000) (SF7, SF9 RMS) RADIATION MONITORING SYSTEM		X									(272000K2.08) (SF7, SF9 RMS) RADIATION MONITORING SYSTEM Knowledge of electrical power supplies to the following: (CFR: 41.7) Continuous air monitoring/post-accident air monitoring systems	2.7	63
79	(268000) (SF9 RW) RADWASTE SYSTEM									X		(268000) (SF9 RW) RADWASTE SYSTEM (G2.2.23) EQUIPMENT CONTROL Ability to track technical specification limiting conditions for operation (CFR: 41.10 / 43.2 / 45.13)	4.6	91
80	(271000) (SF9 OG) OFFGAS SYSTEM							X				(271000A2.05) Ability to (a) predict the impacts of the following on the (SF9 OG) OFFGAS SYSTEM and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operations: (CFR: 41.5 / 45.6 / 43.5 / 45.8) High charcoal bed humidity	2.6	92

Form 4.1-COMMON Common Examination Outline

ES-4.1-COMMON

COMMON Examination Outline (La Salle)

Facility: La Salle

Date of Exam: 5/12/2023

Generic Knowledge and Abilities Outline (Tier 3) (RO/SRO)

Category	K/A #	Topic	Item #	RO		SRO-Only	
				IR	Q#	IR	Q#
1. Conduct of Operations	G2.1.21	(G2.1.21) CONDUCT OF OPERATIONS Ability to verify that a copy of a controlled procedure is the proper revision (CFR: 41.10 / 45.10 / 45.13)	82	3.5	64		
	G2.1.27	(G2.1.27) CONDUCT OF OPERATIONS Knowledge of system purpose and/or function (CFR: 41.7)	83	3.9	65		
	G2.1.9	(G2.1.9) CONDUCT OF OPERATIONS Ability to direct licensed personnel activities inside the control room (SRO Only) (CFR: 43.1 / 45.5 / 45.12 / 45.13)	84			4.5	94
	G2.1.35	(G2.1.35) CONDUCT OF OPERATIONS Knowledge of the fuel handling responsibilities of SROs (SRO Only) (CFR: 43.7)	85			3.9	95
	Subtotal				N/A	2	N/A
2. Equipment Control	G2.2.1	(G2.2.1) EQUIPMENT CONTROL Ability to perform pre-startup procedures for the facility, including operating those controls associated with plant equipment that could affect reactivity (CFR: 41.5 / 41.10 / 43.5 / 43.6 / 45.1)	86	4.5	66		
	G2.2.3	(G2.2.3) EQUIPMENT CONTROL (Multi-unit license) Knowledge of the design, procedural, or operational differences between units (CFR: 41.5 / 41.6 / 41.7 / 41.10 / 45.12)	87	3.8	67		
	G2.2.37	(G2.2.37) EQUIPMENT CONTROL Ability to determine operability or availability of safety-related equipment (SRO Only) (CFR: 43.2 / 43.5 / 45.12)	88			4.6	96
	G2.2.43	(G2.2.43) EQUIPMENT CONTROL Knowledge of the process used to track inoperable alarms (CFR: 41.10 / 43.5 / 45.13)	89			3.3	97
	Subtotal				N/A	2	N/A
3. Radiation Control	G2.3.11	(G2.3.11) RADIATION CONTROL Ability to control radiation releases (CFR: 41.11 / 43.4 / 45.10)	90	3.8	68		
	G2.3.14	(G2.3.14) RADIATION CONTROL (G2.3.14) RADIATION CONTROL Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities, such as analysis and interpretation of radiation and activity readings as they pertain to administrative, normal, abnormal, and emergency procedures, or analysis and interpretation of coolant activity, including comparison to emergency plan or regulatory limits (SRO only) (CFR: 43.4 / 45.10)	91			3.8	98
	Subtotal				N/A	1	N/A
4. Emergency Procedures / Plan	G2.4.3	(G2.4.3) EMERGENCY PROCEDURES/PLAN Ability to identify post-accident instrumentation (CFR: 41.6 / 45.4)	92	3.7	69		
	G2.4.6	(G2.4.6) EMERGENCY PROCEDURES/PLAN Knowledge of emergency and abnormal operating procedures major action categories (CFR: 41.10 / 43.5 / 45.13)	93			4.7	99
	G2.4.28	(G2.4.28) EMERGENCY PROCEDURES/PLAN Knowledge of procedures relating to a security event (ensure that the test item includes no safeguards information) (CFR: 41.10 / 43.5 / 45.13)	94			4.1	100
	Subtotal				N/A	1	N/A
Tier 3 Point Total				N/A	6	N/A	7

Form 4.1-COMMON Common Examination Outline

ES-4.1-COMMON COMMON Examination Outline (La Salle)

Facility: La Salle

Date of Exam: 5/12/2023

Theory (Tier 4) (RO)

Category	K/A #	Topic	Item #	RO	
				IR	Q#
Reactor Theory	292003	(292003K1.09) REACTOR KINETICS AND NEUTRON SOURCES (CFR: 41.1) Define doubling time and calculate it using the power	95	2.6	70
	292007	(292007K1.01) FUEL DEPLETION AND BURNABLE POISONS (CFR: 41.1) Define burnable poison and state its use in the reactor	96	3.1	71
	292008	(292008K1.27) REACTOR OPERATIONAL PHYSICS (CFR: 41.1) (NORMAL REACTOR SHUTDOWN) Explain reactor power response to a control rod insertion	97	3.5	72
	Subtotal				
Thermodynamics	293005	(293005K1.06) THERMODYNAMIC CYCLES (CFR: 41.14) Describe how changes in system parameters affect thermodynamic efficiency	98	2.6	73
	293007	(293007K1.09) HEAT TRANSFER (CFR: 41.14) (CONDENSER APPLICATIONS OF HEAT TRANSFER) Discuss operational implications of condensate	99	2.7	74
	293009	(293009K1.05) CORE THERMAL LIMITS (CFR: 41.14) State the reason thermal limits are necessary	100	3.5	75
	Subtotal				
Tier 3 Point Total				N/A	6