

Facility: LaSalle		Date of Exam: Nov 13-24, 2000						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	4	5	4				5	4			4	26
	2	3	2	3				3	3			3	17
	Tier Totals	7	7	7				8	7			7	43
2. Plant Systems	1	3	2	2	2	2	2	2	2	2	1	3	23
	2	1	1	1	1	2	1	1	1	1	1	2	13
	3	1	0	0	1	0	0	1	0	0	0	1	4
	Tier Totals	5	3	3	4	4	3	4	3	3	2	6	40
3. Generic Knowledge and Abilities					Cat 1	Cat 2	Cat 3	Cat 4					17
					4	5	4	4					
<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. Actual point totals must match those specified in the table.</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>													

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-1

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295003	Partial or Complete Loss of A.C. Power / 6						X	2.1.28 - Knowledge of the purpose and function of major system components and controls.	3.3	1
295003	Partial or Complete Loss of A.C. Power / 6					X		AA2.03 - Battery status: Plant-Specific	3.5	1
295006	SCRAM / 1				X			AA1.01 - RPS	4.2*	1
295007	High Reactor Pressure / 3		X					AK2.01 - Reactor/turbine pressure regulating system	3.7	1
295007	High Reactor Pressure / 3					X		AA2.02 - Reactor power	4.1*	1
295009	Low Reactor Water Level / 2			X				AK3.01 - Recirculation pump run back: Plant-Specific	3.3	1
295010	High Drywell Pressure / 5		X					AK2.04 - Nitrogen makeup system: Plant-Specific	2.8	1
295010	High Drywell Pressure / 5			X				AK3.03 - Radiation level monitoring	3.5	1
295014	Inadvertent Reactivity Addition / 1	X						AK1.01 - Prompt critical	3.8	1
295015	Incomplete SCRAM / 1	X						AK1.02 - Cooldown effects on reactor power	4.1	1
295015	Incomplete SCRAM / 1			X				AK3.01 - Bypassing rod insertion blocks	3.7	1
295016	Control Room Abandonment / 7				X			AA1.01 - RPS	3.9	1
295017	High Off-Site Release Rate / 9		X					AK2.08 - SPDS/ERIS/CRIDS/GDS	3.3	1
295017	High Off-Site Release Rate / 9			X				AK3.01 - System isolations	3.9	1
295023	Refueling Accidents / 8		X					AK2.07 - Standby gas treatment/FRVS	3.9	1

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Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

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E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295024	High Drywell Pressure / 5						X	2.4.1 - Knowledge of EOP entry conditions and immediate action steps.	4.6	1
295025	High Reactor Pressure / 3				X			EA1.01 - Main steam line drains	3.0	1
295026	Suppression Pool High Water Temperature / 5	X						EK1.01 - Pump NPSH	3.4	1
295026	Suppression Pool High Water Temperature / 5					X		EA2.01 - Suppression pool water temperature	4.2*	1
295030	Low Suppression Pool Water Level / 5	X						EK1.03 - Heat capacity	4.1*	1
295031	Reactor Low Water Level / 2					X		EA2.02 - Reactor power	4.2*	1
295037	SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1		X					EK2.14 - RPIS: Plant-Specific	3.9	1
295037	SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1						X	2.4.1 - Knowledge of EOP entry conditions and immediate action steps.	4.6	1
295038	High Off-Site Release Rate / 9				X			EA1.02 - †Meteorological instrumentation	3.8	1
295038	High Off-Site Release Rate / 9					X		EA2.04 - Source of off-site release	4.5*	1
500000	High Containment Hydrogen Concentration / 5				X			EA1.03 - Containment Atmosphere Control System	3.2	1

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

Group Point Total: 26

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Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-1

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295001	Partial or Complete Loss of Forced Core Flow Circulation / 1		X					AK2.02 - Nuclear boiler instrumentation	3.3	1
295001	Partial or Complete Loss of Forced Core Flow Circulation / 1					X		AA2.06 - Nuclear boiler instrumentation	3.3	1
295005	Main Turbine Generator Trip / 3				X			AA1.02 - RPS	3.6	1
295008	High Reactor Water Level / 2				X			AA1.09 - Ability to drain: Plant-Specific	3.3	1
295008	High Reactor Water Level / 2					X		AA2.02 - Steam flow/feedflow mismatch	3.4	1
295019	Partial or Complete Loss of Instrument Air / 8					X		AA2.01 - Instrument air system pressure	3.6	1
295020	Inadvertent Containment Isolation / 5	X						AK1.02 - Power/reactivity control	3.8	1
295020	Inadvertent Containment Isolation / 5			X				AK3.02 - Drywell/containment pressure response	3.5	1
295021	Loss of Shutdown Cooling / 4	X						AK1.04 - Natural circulation	3.7	1
295028	High Drywell Temperature / 5						X	2.4.1 - Knowledge of EOP entry conditions and immediate action steps.	4.6	1
295032	High Secondary Containment Area Temperature / 5				X			EA1.05 - Affected systems so as to isolate damaged portions	3.9	1
295033	High Secondary Containment Area Radiation Levels / 9			X				EK3.05 - †Emergency plan	4.5*	1

BWR SR Examination Outline

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Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-1

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295034	Secondary Containment Ventilation High Radiation / 9		X					EK2.06 - PCIS/NSSSS: Plant-Specific	4.2	1
295034	Secondary Containment Ventilation High Radiation / 9						X	2.4.1 - Knowledge of EOP entry conditions and immediate action steps.	4.6	1
295035	Secondary Containment High Differential Pressure / 5						X	2.4.1 - Knowledge of EOP entry conditions and immediate action steps.	4.6	1
295036	Secondary Containment High Sump/Area Water Level / 5	X						EK1.01 - Radiation releases	3.1	1
600000	Plant Fire On Site / 8			X				AK3.04 - Actions contained in the abnormal procedure for plant fire on site	3.4	1

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

Group Point Total: 17

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Plant Systems - Tier 2 / Group 1

Form ES-401-1

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
202002	Recirculation Flow Control System / 1		X										K2.02 - Hydraulic power unit: Plant-Specific	2.6	1
202002	Recirculation Flow Control System / 1								X				A2.07 - Loss of feedwater signal inputs: Plant-Specific	3.3	1
203000	RHR/LPCI: Injection Mode (Plant Specific) / 2								X				A2.17 - Keep fill system failure	3.5	1
209001	Low Pressure Core Spray System / 2		X										K2.02 - Valve power	2.7*	1
209001	Low Pressure Core Spray System / 2							X					A1.03 - Reactor water level	3.9	1
209002	High Pressure Core Spray System (HPCS) / 2				X								K4.07 - Override of reactor water level interlock: Plant-Specific	3.0	1
211000	Standby Liquid Control System / 1					X							K5.06 - Tank level measurement	3.2	1
212000	Reactor Protection System / 7	X											K1.10 - Main turbine	3.4	1
212000	Reactor Protection System / 7				X								K4.02 - The prevention of a reactor SCRAM following a single component failure	3.7	1
215004	Source Range Monitor (SRM) System / 7									X			A3.01 - Meters and recorders	3.2	1
215005	Average Power Range Monitor/Local Power Range Monitor System / 7					X							K5.04 - LPRM detector location and core symmetry	3.2	1
216000	Nuclear Boiler Instrumentation / 7						X						K6.02 - D.C. electrical distribution	3.0	1

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Plant Systems - Tier 2 / Group 1

Form ES-401-1

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
216000	Nuclear Boiler Instrumentation / 7									X			A3.01 - Relationship between meter/recorder readings and actual parameter values: Plant-Specific	3.4	1
223002	Primary Containment Isolation System/Nuclear Steam Supply Shut-Off / 5						X						K6.06 - Various process instrumentation	2.9	1
226001	RHR/LPCI: Containment Spray System Mode / 5			X									K3.01 - Containment/drywell/suppression chamber pressure	3.7	1
239002	Relief/Safety Valves / 3							X					A1.05 - Reactor water level	3.8	1
241000	Reactor/Turbine Pressure Regulating System / 3											X	2.1.11 - Knowledge of less than one hour technical specification action statements for systems.	3.8	1
241000	Reactor/Turbine Pressure Regulating System / 3	X											K1.08 - Control/governor valves	3.7	1
259002	Reactor Water Level Control System / 2											X	2.1.12 - Ability to apply technical specifications for a system.	4.0	1
259002	Reactor Water Level Control System / 2			X									K3.07 - Reactor water level indication	3.4	1

262001 A.C. Electrical Distribution / 6

X 2.1.11 - Knowledge of less than one hour technical specification action statements for systems. 3.8 1

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Plant Systems - Tier 2 / Group 1

Form ES-401-1

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
262001	A.C. Electrical Distribution / 6										X		A4.05 - Voltage, current, power, and frequency on A.C. buses	3.3	1
264000	Emergency Generators (Diesel/Jet) / 6	X											K1.04 - Emergency generator cooling water system	3.3	1

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

Group Point Total: 23

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Plant Systems - Tier 2 / Group 2

Form ES-401-1

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
201001	Control Rod Drive Hydraulic System / 1											X	2.1.11 - Knowledge of less than one hour technical specification action statements for systems.	3.8	1
201001	Control Rod Drive Hydraulic System / 1	X											K1.10 - Control rod drive mechanisms	2.8	1
204000	Reactor Water Cleanup System / 2									X			A3.03 - Response to system isolations	3.6	1
215002	Rod Block Monitor System / 7		X										K2.03 - APRM channels: BWR-3, 4, 5	2.9	1
215003	Intermediate Range Monitor (IRM) System / 7								X				A2.07 - Failed recorder	2.7	1
245000	Main Turbine Generator and Auxiliary Systems / 4										X		A4.07 - Turbine valve position	2.9	1
259001	Reactor Feedwater System / 2					X							K5.03 - Turbine operation: TDRFP's-Only	2.8	1
259001	Reactor Feedwater System / 2							X					A1.06 - Feedwater heater level	2.7	1
262002	Uninterruptable Power Supply (A.C./D.C.) / 6						X						K6.01 - A.C. electrical power	2.9	1
263000	D.C. Electrical Distribution / 6											X	2.1.12 - Ability to apply technical specifications for a system.	4.0	1
263000	D.C. Electrical Distribution / 6					X							K5.01 - Hydrogen generation during battery charging	2.9	1

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Plant Systems - Tier 2 / Group 2

Form ES-401-1

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
286000	Fire Protection System / 8			X									K3.02 - Personnel protection	3.4	1
290003	Control Room HVAC / 9				X								K4.01 - System initiations/reconfiguration: Plant-Specific	3.2	1

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

Group Point Total: 13

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Plant Systems - Tier 2 / Group 3

Form ES-401-1

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
233000	Fuel Pool Cooling and Clean-up / 9							X					A1.01 - Surge tank level	2.9	1
239001	Main and Reheat Steam System / 3				X								K4.02 - Automatic isolation and opening of drain valves: Plant-Specific	3.2	1
288000	Plant Ventilation Systems / 9											X	2.1.12 - Ability to apply technical specifications for a system.	4.0	1
288000	Plant Ventilation Systems / 9	X											K1.06 - Plant air systems	2.7	1

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

Group Point Total: 4

Generic Knowledge and Abilities Outline (Tier 3)

Printed: 06/05/2006

BWR SRO Examination Outline

Form ES-401-5

Facility: LaSalle

Generic Category	KA	KA Topic	Imp.	Points
Conduct of Operations	2.1.33	Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.	4.0	1
	2.1.32	Ability to explain and apply system limits and precautions.	3.8	1
	2.1.25	Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.	3.1	1
	2.1.7	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.	4.4	1
Category Total:			4	
Equipment Control	2.2.18	Knowledge of the process for managing maintenance activities during shutdown operations.	3.6	1
	2.2.24	Ability to analyze the affect of maintenance activities on LCO status.	3.8	1
	2.2.12	Knowledge of surveillance procedures.	3.4	1
	2.2.28	Knowledge of new and spent fuel movement procedures.	3.5	1
	2.2.7	Knowledge of the process for conducting tests or experiments not described in the safety analysis report.	3.2	1
Category Total:			5	
Radiation Control	2.3.10	Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.	3.3	1
	2.3.4	Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized.	3.1	1
	2.3.9	Knowledge of the process for performing a containment purge.	3.4	1
	2.3.6	Knowledge of the requirements for reviewing and approving release permits.	3.1	1
Category Total:			4	

Generic Knowledge and Abilities Outline (Tier 3)

Printed: 06/05/2006

BWR SRO Examination Outline

Form ES-401-5

Facility: LaSalle

Generic Category	KA	KA Topic	Imp.	Points
Emergency Plan	2.4.8	Knowledge of how the event-based emergency/abnormal operating procedures are used in conjunction with the symptom-based EOPs.	3.7	1
	2.4.6	Knowledge symptom based EOP mitigation strategies.	4.0	1
	2.4.12	Knowledge of general operating crew responsibilities during emergency operations.	3.9	1
	2.4.11	Knowledge of abnormal condition procedures.	3.6	1

Category Total: 4

Generic Total: 17

SRO ILT EXAM OUTLINE CHANGES

System Number	K / A	Exam	Comment
202002	A2.07	BOTH	Randomly selected from 202002 A2.##'s available to replace 202002 A2.01 which was not applicable to LaSalle.
295001	AA2.06	BOTH	KA changed from RO to BOTH to meet NUREG 1021 Rev 8 Draft 2000 criteria for Tier 1 & 2
295003	AA2.03	BOTH	KA changed from RO to BOTH to meet NUREG 1021 Rev 8 Draft 2000 criteria for Tier 1 & 2
295038	EA2.04	BOTH	KA changed from RO to BOTH to meet NUREG 1021 Rev 8 Draft 2000 criteria for Tier 1 & 2
295017	AK2.08	BOTH	Randomly selected from 295017 AK2.##'s available to replace 295017 AK2.13 which was not applicable to LaSalle.
GENERIC	2.2.7	SRO	Randomly selected KA added to meet NUREG 1021 Rev 8 Draft 2000 criteria for Tier 3
GENERIC	2.3.6	SRO	Randomly selected KA added to meet NUREG 1021 Rev 8 Draft 2000 criteria for Tier 3
GENERIC	2.4.11	SRO	Randomly selected KA added to meet NUREG 1021 Rev 8 Draft 2000 criteria for Tier 3