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**EXAMINATION OUTLINE SUBMITTAL**

**FOR THE LASALLE INITIAL EXAMINATION - NOVEMBER 2006**

Facility: LaSalle County Station U1/U2		Date of Examination: November 13, 2006		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	JZ	N/A	bm
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled.	JZ	N/A	bm
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	JZ	N/A	bm
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	JZ	N/A	bm
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	JZ	N/A	bm
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity, and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s), and that scenarios will not be repeated on subsequent days.	JZ	N/A	bm
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	JZ	N/A	bm
3. W / T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form (3) no tasks are duplicated from the applicants' audit test(s) (4) the number of new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	JZ	N/A	bm
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form (2) at least one task is new or significantly modified (3) no more than one task is repeated from the last two NRC licensing examinations	JZ	N/A	bm
	c. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	JZ	N/A	bm
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	JZ	N/A	bm
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	JZ	N/A	bm
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	JZ	N/A	bm
	d. Check for duplication and overlap among exam sections.	JZ	N/A	bm
	e. Check the entire exam for balance of coverage.	JZ	N/A	bm
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	JZ	N/A	bm
a. Author		David W. Reeser / <i>David W. Reeser</i>		Date
b. Facility Reviewer (*)		n/a		N/A
c. NRC Chief Examiner (#)		Dell R. McNeill / <i>Dell R. McNeill</i>		9/11/06
d. NRC Supervisor		Hironori Peterson / <i>Hironori Peterson</i>		9/12/06
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.				

Facility: LaSalle Co. StationDate of Examination: November 2006Examination Level (circle one): RO / SROOperating Test Number: 2006301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	N S	RO/SRO - Using plant electrical drawings determine the impact of pulling a relay. (2.1.24)
Conduct of Operations	M S	RO/SRO - Evaluate plant conditions following a power increase to determine if any limits have been exceeded. (2.1.32)
Equipment Control	D S	RO/SRO - Perform Technical Specification Weekly Offsite Power Lineup Verification. (2.2.12)
Radiation Control	N Plant	SRO - Initiate surveillance LOS-PC-M1, Primary Containment Integrity for Modes 1, 2, & 3 (2.3.11)
Emergency Plan	D S	SRO - Determine whether KI should be issued to emergency workers. [EP-AA-112-100-F-01 & EP-AA-113] (2.4.40)

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

- Type Codes & Criteria:
- (C)ontrol room
  - (D)irect from bank ( $\leq 3$  for ROs;  $\leq 4$  for SROs & RO retakes)
  - (N)ew or (M)odified from bank ( $\geq 1$ )
  - (P)revious 2 exams ( $\leq 1$ ; randomly selected)
  - (S)imulator

Facility: <u>LaSalle Co. Station U1/U2</u>		Date of Examination: <u>November 2006</u>
Exam Level (circle one): RO / <u>SRO-I</u> / SRO-U		Operating Test No.: <u>2006301</u>
Control Room Systems® (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a. Reactor Manual Control/Respond to Loss of RPIS Displays	N, S	1
b. High Pressure Core Spray/Manually start and lineup for injection	A, D, S	2
c. Safety Relief Valves/Close a stuck open SRV by removing fuses.	D, S	3
d. Main and Reheat Steam/Re-pressurize MSL following inadvertent isolation.	L, N, S	4
e. RHR/LPCI: Containment Spray Mode/Shift from DW Spray Mode to Suppression Pool Cooling Mode	A, N, S	5
f. Rod Worth Minimizer/Perform RWM Operability Check for decreasing power below 10% in MODE 1	A, L, N, S	7
g. Control Room HVAC/Emergency Makeup Unit Startup	N, S	9
h. n/a	n/a	n/a
In-Plant Systems® (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. Off-gas/SJAE Pressure Control Using Manual Bypass Valve	E, N, R	9
j. Uninterruptible Power Supply/CX Inverter Startup	N, R	6
k. Instrument Air/Respond to Air Compressor running unloaded due to excessive surge condition.	E, N, R	8
@ All control room (and in-plant) systems must be different and serve different safety functions; in-plant systems and functions may overlap those tested in the control room.		
* Type Codes	Criteria for RO / SRO-I / SRO-U	
(A)lternate path	4-6 / 4-6 / 2-3	
(C)ontrol room		
(D)irect from bank	$\leq 9 / \leq 8 / \leq 4$	
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$	
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$	
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$	
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)	
(R)CA	$\geq 1 / \geq 1 / \geq 1$	
(S)imulator		

Facility: <u>LaSalle Co. Station U1/U2</u> Exam Level (circle one): RO / SRO-I / <b>SRO-U</b>	Date of Examination: <u>November 13, 2006</u> Operating Test No.: <u>2006301</u>	
Control Room Systems® (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a. n/a		
b. High Pressure Core Spray/Manually start and lineup for injection	A, D, S	2
c. Safety Relief Valves/Close a stuck open SRV by removing fuses.	D, S	3
d. n/a		
e. n/a		
f. Rod Worth Minimizer/Perform RWM Operability Check for decreasing power below 10% in MODE 1	A, L, N, S	7
g.		
h.		
In-Plant Systems® (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. Off-gas/SJAE Pressure Control Using Manual Bypass Valve	E, N, R	9
j. Uninterruptible Power Supply/CX Inverter Startup	N, R	6
k.		
@ All control room (and in-plant) systems must be different and serve different safety functions; in-plant systems and functions may overlap those tested in the control room.		
* Type Codes	Criteria for RO / SRO-I / SRO-U	
(A)lternate path (C)ontrol room (D)irect from bank (E)mergency or abnormal in-plant (L)ow-Power / Shutdown (N)ew or (M)odified from bank including 1(A) (P)revious 2 exams (R)CA (S)imulator	4-6 / 4-6 / 2-3  $\leq 9 / \leq 8 / \leq 4$ $\geq 1 / \geq 1 / \geq 1$ $\geq 1 / \geq 1 / \geq 1$ $\geq 2 / \geq 2 / \geq 1$ $\leq 3 / \leq 3 / \leq 2$ (randomly selected) $\geq 1 / \geq 1 / \geq 1$	

Facility: LaSalle County Station U1/U2		Date of Exam: November 9, 2006		Operating Test No.: 2006301													
A P P L I C A N T	E V E N T  T Y P E	Scenarios												T O T A L	M I N I M U M (*)		
		1			2			3			4						
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P				
		R	I	U													
RO	RX	1			1									2	1	1	0
SRO-I	NOR													0	1	1	1
SRO-U	I/C	4			4				3					1	4	4	2
	MAJ	2			1				2					5	2	2	1
	TS	3												3	0	2	2
RO	RX		1											1	1	1	0
SRO-I	NOR					1								1	1	1	1
SRO-U	I/C		2			1	5							8	4	4	2
	MAJ		2			1	2							5	2	2	1
	TS						3							3	0	2	2
RO	RX				1									1	1	1	0
SRO-I	NOR				1									1	1	1	1
SRO-U	I/C			2	5			2						9	4	4	2
	MAJ			2	1			2						5	2	2	1
	TS				2									2	0	2	2
RO	RX														1	1	0
SRO-I	NOR														1	1	1
SRO-U	I/C														4	4	2
	MAJ														2	2	1
	TS														0	2	2

## Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position.
2. Reactivity manipulations may be conducted under normal or *controlled abnormal* conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (\*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.
3. Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirements specified for the applicant's license level in the right-hand columns.

Facility: LaSalle		Date of Exam: November 2006															
Tier	Group	RO K/A Category Points											SRO-Only Points				
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total	
1. Emergency & Abnormal Plant Evolutions	1	3	4	3	N/A			3	3	N/A			4	20	4	3	7
	2	1	1	1				2	1				1	7	2	1	3
	Tier Totals	4	5	4				5	4				5	27	6	4	10
2. Plant Systems	1	3	3	3	2	2	2	2	2	2	2	3	26	3	2	5	
	2	1	0	2	1	2	1	1	1	1	1	12	2	1	3		
	Tier Totals	4	3	5	3	4	3	3	3	3	3	4	38	5	3	8	
3. Generic Knowledge and Abilities Categories					1	2	3	4	10	1	2	3	4	7			
					2	3	2	3	2	2	1	2					
<p>Note: 1. Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, 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 RO exam must total 75 points and the SRO-only exam must total 25 points.</p> <p>3. Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems that are not included on the outline should be added. Refer to ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements.</p> <p>4. Select topics from as many systems and evolutions as possible; sample every system or evolution in the group before selecting a second topic for any system or evolution.</p> <p>e. Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively.</p> <p>6. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.</p> <p>7.* The generic (G) 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>8. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IRs) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note #1 does not apply). Use duplicate pages for RO and SRO-only exams.</p> <p>9. For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43.</p>																	

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO / SRO)						Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4				0 3			Ability to operate and/or monitor RMCS as it applies to ....	2.6	1/0
295003 Partial or Complete Loss of AC / 6					0 2		Ability to determine and/or interpret reactor power/pressure/and level as they apply to ...	4.2	1/0
295004 Partial or Total Loss of DC Pwr / 6						X	2.1.16 – Ability to operate the plant phone/paging system/and two way radio.	2.9	1/0
295005 Main Turbine Generator Trip / 3			0 6		0 1		K3.06 – Knowledge of the reasons for realignment of electrical distribution response as it applies to ...	3.3	1/1
							A2.01(SRO Only) – Ability to determine and/or interpret turbine speed as it applies to ...	2.7	
295006 SCRAM / 1				0 5		X	A1.05 – Ability to operate and/or monitor the Neutron Monitoring System it applies to ...	4.2	1/1
							2.4.27(SRO Only) – Knowledge of fire in the plant procedures.	3.5	
295016 Control Room Abandonment / 7		0 1					Knowledge of the interrelations between ..... and the Remote Shutdown Panel.	4.4	1/0
295018 Partial or Total Loss of CCW / 8		0 2					Knowledge of the interrelations between .... and plant operations.	3.4	1/0
295019 Partial or Total Loss of Inst. Air / 8			0 2				Knowledge of the reasons for standby air compressor response as it applies to ....	3.5	1/0
295021 Loss of Shutdown Cooling / 4				0 1			Ability to operate and/or monitor the RWCU system as it applies to ...	3.4	1/0
295023 Refueling Acc / 8					0 1		Ability to determine and/or interpret area radiation levels as they apply to ....	3.6	1/0
295024 High Drywell Pressure / 5						X	2.4.11 – Knowledge of abnormal condition procedures.	3.4	1/0
295025 High Reactor Pressure / 3					0 6 / 0 4		A2.06 – Ability to determine and/or interpret reactor water level as it applies to ....	3.7	1/1
							A2.04(SRO Only) – Ability to determine and/or interpret suppression pool level as it applies to ....	3.9	
295026 Suppression Pool High Water Temp. / 5						X	2.2.11 – Knowledge of the process for controlling temporary changes.	2.5	1/1
							2.4.14(SRO Only) – Knowledge of general guidelines for EOP flowchart use.	3.9	
295027 High Containment Temperature / 5							SUPPRESSED – LaSalle has a Mark II Containment		
295028 High Drywell Temperature / 5					0 4	X	2.1.1 – Knowledge of the conduct of operations.	3.7	1/1
							A2.04(SRO Only) – Ability to determine and/or interpret drywell pressure as it applies to ....	4.2	
295030 Low Suppression Pool Wtr Lvl / 5	0 2				0 4		K1.02 – Knowledge of the operational implications on pump NPSH as it applies to ....	3.5	1/1
							A2.04(SRO Only) – Ability to determine and/or interpret drywell/suppression chamber d/P as it applies to ....	3.7	



ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO / SRO)						Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
295031 Reactor Low Water Level / 2	0 1	0 1				X	K1.01 – Knowledge of the operational implications on adequate core cooling as it applies to .... K2.01 – Knowledge of the interrelations between .... and reactor water level indication. 2.1.25(SRO Only) – Ability to obtain and interpret station reference material such as graphs/monographs/and tables which contain performance data.	4.6 4.4 3.1	2/1
295037 SCRAM Condition Present and Power Above APRM Downscale or Unknown / 1	0 5						Knowledge of the operational implications of cold shutdown boron weight as it applies to ....	3.4	1/0
295038 High Off-site Release Rate / 9		0 3					Knowledge of the interrelations between .... and the Post Accident Sample System.	3.8	1/0
600000 Plant Fire On Site / 8			0 4				Knowledge of the reasons for the actions contained in the abnormal procedure for ....	2.8	1/0
K/A Category Totals:	3	4	3	3	3 / 4	4 / 3	Group Point Total:		20/7

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO / SRO)							Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#	
295002 Loss of Main Condenser Vac / 3										
295007 High Reactor Pressure / 3										
295008 High Reactor Water Level / 2										
295009 Low Reactor Water Level / 2										
295010 High Drywell Pressure / 5										
295011 High Containment Temp / 5							SUPPRESSED – LaSalle has a Mark II Containment			
295012 High Drywell Temperature / 5				0 2			Ability to operate and/or monitor the Drywell Cooling system as it applies to ....	3.8	1/0	
295013 High Suppression Pool Temp. / 5					0 1		Ability to determine and/or interpret the following as they apply to HIGH SUPPRESSION POOL TEMPERATURE:....	3.8	1/0	
295014 Inadvertent Reactivity Addition / 1						X	2.2.33 – Knowledge of control rod programming.	2.5	1/0	
295015 Incomplete SCRAM / 1					0 2		A2.02(SRO Only) – Ability to determine and/or interpret control rod position as it applies to ....	4.2	0/1	
295017 High Off-site Release Rate / 9						X	2.4.6(SRO Only) – Knowledge of symptom-based EOP mitigation strategies.	4.0	0/1	
295020 Inadvertent Cont. Isolation / 5 & 7	0 5						Knowledge of the operational implications of a loss of dywell/containment cooling as it applies to ....	3.3	1/0	
295022 Loss of CRD Pumps / 1		0 7					Knowledge of the interrelations between .... and reactor pressure(SCRAM assist)	3.4	1/0	
295029 High Suppression Pool Wtr Lvl / 5			0 1				Knowledge of the reasons for emergency depressurization as it applies to ....	3.5	1/0	
295032 High Secondary Containment Area Temperature / 5				0 4			Ability to operate and/or monitor the leak detection systems/components as they it apply to ....	3.4	1/0	
295033 High Secondary Containment Area Radiation Levels / 9										
295034 Secondary Containment Ventilation High Radiation / 9										
295035 Secondary Containment High Differential Pressure / 5					0 1		A2.01(SRO Only) – Ability to determine and/or interpret secondary containment pressure as it applies to ....	3.9	0/1	
295036 Secondary Containment High Sump/Area Water Level / 5										
500000 High CTMT Hydrogen Conc. / 5										
K/A Category Point Totals:	1	1	1	2	1 / 2	1 / 1	Group Point Total:	7/3		

ES-401		BWR Examination Outline Plant Systems - Tier 2/Group 1 (RO / SRO)											Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
203000 RHR/LPCI: Injection Mode		0 3								0 3		K2.03 – Knowledge of the electrical power supplies to the initiation logic. A4.03 – Ability to manually operate and/or monitor the keep fill system.	2.7 3.4	2/0
205000 Shutdown Cooling			0 1								X	K3.01 – Knowledge of the effect that a loss or malfunction of the .... will have on reactor pressure. 2.2.1 – Ability to perform pre-startup procedures including those controls that could affect reactivity.	3.3 3.7	2/0
206000 HPCI												SUPPRESSED – LaSalle does not have a HPCI system.		
207000 Isolation (Emergency) Condenser												SUPPRESSED – LaSalle does not have an Isolation Condenser		
209001 LPCS				0 8				0 2				K4.08 – Knowledge of .... design feature(s) and/or interlocks which provide for automatic system initiation. A2.02(SRO Only) – Ability to predict the impacts of valve closures on the ....; and use procedures to correct, control, or mitigate the consequences.	3.8 3.2	1/1
209002 HPCS					0 1							Knowledge of the operational implications of an indication of pump cavitation as it applies to ....	2.5	1/0
211000 SLC						0 1						Knowledge of the effect that a loss or malfunction of the plant air systems will have on the .... Plant Obj. # 028.00.16	2.4	1/0
212000 RPS							0 3					Ability to predict and/or monitor changes in RPS motor-generator output frequency. Plant Obj. # 049.00.05/06	2.4	1/0
215003 IRM								0 5				Ability to predict the impacts of faulty or erratic operation of detectors/system on the ....; and use procedures to correct, control, or mitigate the consequences.	3.3	1/0
215004 Source Range Monitor									0 2			Ability to monitor automatic operation of the .... including annunciator and alarm signals.	3.4	1/0
215005 APRM / LPRM										0 6		Ability to manually operate and/or monitor verification of proper functioning/operability.	3.6	1/0
217000 RCIC											X	2.1.30 – Ability to locate and operate components/including local controls.	3.9	1/0
218000 ADS	0 4							0 4				K1.04 – Knowledge of the physical connections and/or cause-effect relationships between .... and drywell/containment pressure. A2.04(SRO Only) – Ability to predict the impacts of an .... system failure to initiate; and use procedures to correct, control, or mitigate the consequences.	3.9 4.2	1/1

ES-401		BWR Examination Outline Plant Systems - Tier 2/Group 1 (RO / SRO)											Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
223002 PCIS/Nuclear Steam Supply Shutoff		0 1									X	K2.01 – Knowledge of the electrical power supplies to the logic power supplies. Plant Obj # 091.00.16 2.2.2(SRO Only) – Ability to manipulate the controls as required to operate between shutdown and designated power levels.	2.4 3.5	1/1
239002 SRVs	0 8		0 1									K1.08 – Knowledge of the physical connections and/or cause-effect relationships between .... and ADS. K3.01 – Knowledge of the effect that a loss or malfunction of the .... will have on reactor pressure control.	4.0 3.9	2/0
259002 Reactor Water Level Control		0 1										Knowledge of the electrical power supplies to reactor water level control system circuits Plant Obj # 078.00.16	2.4	1/0
261000 SGTS			0 5									Knowledge of the effect that a loss or malfunction of .... will have on secondary containment radiation/ contamination levels.	3.2	1/0
262001 AC Electrical Distribution				0 1								Knowledge of .... design feature(s) and/or interlocks which provide for bus lockouts.	3.0	1/0
262002 UPS (AC/DC)						0 2						Knowledge of the effect that a loss or malfunction of D.C. power will have on....	2.8	1/0
263000 DC Electrical Distribution					0 1						X	K5.01 – Knowledge of the operational implications of Hydrogen generation during battery charging as it applies to .... 2.4.26 – Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.	2.6 2.9	2/0
264000 EDGs							0 3	0 1				A1.03 Ability to predict and/or monitor changes in operating parameters. A2.01(SRO Only) – Ability to predict the impacts of parallel generator operation on the ....; and use procedures to correct, control, or mitigate the consequences.	2.8 3.5	1/1
300000 Instrument Air								0 1			X	A2.01 – Ability to predict the impacts of air dryer and filter malfunctions on the ....; and use procedures to correct,control, or mitigate the consequences. 2.4.8(SRO Only) – Knowledge of how event-based emergency/abnormal operating procedures are used in conjunction with symptom-based EOPs.	2.9 3.7	1/1
400000 Component Cooling Water	0 2									0 1		K1.02 – Knowledge of the physical connections and/or cause-effect relationships between .... and loads cooled. A3.01 – Ability to monitor automatic operation of the .... including setpoints on instrument signal levels for normal ops, warnings, and trips that are applicable to ....	3.2 3.0	2/0
K/A Category Point Totals:	3	3	3	2	2	2	2	2 / 3	2	2	3 / 2	Group Point Total:		26/5

BWR Examination Outline												Form ES-401-1		
Plant Systems - Tier 2/Group 2 (RO / SRO)														
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
201001 CRD Hydraulic														
201002 RMCS														
201003 Control Rod and Drive Mechanism														
201004 RSCS												SUPPRESSED – RSCS has been abandoned in place at LaSalle.		
201005 RCIS												SUPPRESSED – LaSalle does not have RCIS.		
201006 RWM														
202001 Recirculation														
202002 Recirculation Flow Control														
204000 RWCU														
214000 RPIS					0 1							Knowledge of the operational implications of reed switches as they applies to ....	2.7	1/0
215001 Traversing In-core Probe			0 1									Knowledge of the effect that a loss or malfunction of the .... will have on Local Power Range Monitor Calibration Plant Obj. # 046.00.18	2.3	1/0
215002 RBM				0 3								Knowledge of .... design feature(s) and/or interlocks which provide for initiation point (30%)	2.9	1/0
216000 Nuclear Boiler Inst.					1 0							Knowledge of the operational implications of vessel level measurement as it applies to ....	3.1	1/0
219000 RHR/LPCI: Torus/Pool Cooling Mode						0 8						Knowledge of the effect that a loss or malfunction of ECCS Room Cooling will have on....	2.7	1/0
223001 Primary CTMT and Aux.							0 2					Ability to predict and/or monitor changes in Drywell pressure associated with operation of ....	3.6	1/0
226001 RHR/LPCI: CTMT Spray Mode								1 0				Ability to predict the impacts of Nuclear Boiler Instrument failures on the ....; and use procedures to correct,control, or mitigate the consequences.	3.0	1/0
230000 RHR/LPCI: Torus/Pool Spray Mode									0 1			Ability to monitor automatic operation of the .... including valve operation.	3.4	1/0
233000 Fuel Pool Cooling/Cleanup										1 0		Ability to manually operate and/or monitor tank levels.	2.5	1/0
234000 Fuel Handling Equipment											X	2.2.26(SRO Only) – Knowledge of refueling administrative requirements.	3.7	0/1
239001 Main and Reheat Steam								0 1				A2.01(SRO Only) – Ability to predict the impacts of a malfunction of reactor turbine pressure regulating system on the ....; and use procedures to correct,control, or mitigate the consequences.	3.9	0/1

ES-401		BWR Examination Outline Plant Systems - Tier 2/Group 2 (RO / SRO)										Form ES-401-1		
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
239003 MSIV Leakage Control												SUPPRESSED – MSIV Leakage Control abandoned in place at LaSalle.		
241000 Reactor/Turbine Pressure Regulator											X	2.1.7 – Ability to evaluate plant performance and make operational judgements based on operating characteristics/reactor behavior/and instrument interpretation.	3.7	1/0
245000 Main Turbine Gen. / Aux.	0 6											Knowledge of the physical connections and/or cause-effect relationships between .... and component cooling water system.	2.6	1/0
256000 Reactor Condensate			0 2									Knowledge of the effect that a loss or malfunction of the .... will have on CRD Hydraulic system.	3.2	1/0
259001 Reactor Feedwater								0 9				A2.09(SRO Only) – Ability to predict the impacts of TDRFP steam inlet pressure flow on the ....; and use procedures to correct,control, or mitigate the consequences.	2.6	0/1
268000 Radwaste														
271000 Offgas														
272000 Radiation Monitoring														
286000 Fire Protection														
288000 Plant Ventilation														
290001 Secondary CTMT														
290003 Control Room HVAC														
290002 Reactor Vessel Internals														
K/A Category Point Totals:	1	0	2	1	2	1	1	1 / 2	1	1	1	Group Point Total:		12/3

Facility: LaSalle County Station U1/U2			Date of Exam: November 2006			
Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
1. Conduct of Operations	2.1.1	Conduct of operations requirements.	3.7	1		
	2.1.17	Make accurate/clear and concise verbal reports.	3.5	1		
	2.1.11	Knowledge of less than one hour technical specification action statements for systems.			3.8	1
	2.1.34	Maintain primary and secondary plant chemistry within allowable limits.			2.9	1
	Subtotal			2		2
2. Equipment Control	2.2.12	Surveillance procedures.	3.0	1		
	2.2.13	Tagging and clearance procedures.	3.6	1		
	2.2.33	Control rod programming	2.5	1		
	2.2.9	Knowledge of the process for determining if the proposed change / test or experiment increases the probability of occurrence of an accident during the change / test or experiment.			3.3	1
	2.2.29	SRO fuel handling responsibilities.			3.8	1
	Subtotal			3		2
3. Radiation Control	2.3.1	10 CFR 20 and related facility radiation controls.	2.6	1		
	2.3.11	Ability to control radiation releases.	2.7	1		
	2.3.10	Perform procedures to reduce excessive levels of radiation and guard against personnel exposure.			3.3	1
	Subtotal			2		1
4. Emergency Procedures / Plan	2.4.20	Knowledge of operational implications of EOP warnings / cautions / and notes.	3.1	1		
	2.4.46	Verify that the alarms are consistent with plant conditions.	3.3	1		
	2.4.48	Interpret control room indications to verify the status ...understand ...affect plant and system conditions.	3.5	1		
	2.4.18	Knowledge for the specific basis for EOPs.			3.6	1
	2.4.30	Knowledge of which events related to system operations/status should be reported to outside agencies.			3.6	1
	Subtotal			3		2
Tier 3 Point Total				10		7

Facility: LaSalle Scenario No.: 1 Op-Test No.: 2006-01

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

Initial Conditions: 100% RTP; RCIC is OOS, day 3 of a scheduled 3 day outage.

Turnover: Maintain power at 100% RTP except as required to perform TSV/EOC-RPT Functional Test. RCIC is OOS, day 3 of a scheduled 3 day outage and expected to be returned to service early next shift..

Event No.	Malf. No.	Event Type*	Event Description
1		I (TS) BOP/SRO	Perform TSV Scram and EOC-RPT Functional Test. One or more valves will fail to meet acceptance criteria requiring TS evaluation.
2		R RO/SRO	Commence 200 Mwe Load Decrease.
3		C (TS) RO/SRO	During load decrease one RR FCV controller fails such that valve continues to close until locked up by operator. Resultant flow mismatch will require TS evaluation.
4		M (TS) ALL	Degraded off-site power supplies leading to LOOP and Main Generator trips. Bus 141Y normal feed breaker fails to open, loss of power to bus 141Y.
5		I/C RO/SRO	Full Core Display fails (due to loss of power) requiring RO to use alternate methods to determine shutdown status.
6		C BOP/SRO	Degraded/Loss of cooling to Division 2 DG results in loss of bus 142Y.
7		M ALL	Station Blackout.

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor



Facility: LaSalle Co. Station Scenario No.: 2 Op-Test No.: 2006-301

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

Initial Conditions: Approximate 30% RTP, both RR Pumps in slow speed with FCVs full open. MDRFP is OOS.

Turnover: Unit shutdown in progress (step E2.9 of LGP-2-1) to repair condenser tube leaks. Approximate 30% RTP, both RR Pumps in slow speed with FCVs full open. MDRFP is OOS due to oil contamination. Two TDRFPs are in service still.

Event No.	Malf. No.	Event Type*	Event Description
1		R RO/SRO	Insert control rods until generator output is approx. 60 MWe
2		I (TS) RO/SRO	TCV & TSV Scram Bypass Relay energizes prematurely while greater than 25% Power.
3		N BOP/SRO	Remove one TDRFP from service and ensure transfer to single element control.
4		I (TS) RO/SRO	Two or more IRMs remain greater than 50% scale on range 10 after IRM detectors are inserted.
5		I/C RO/SRO	Operating feedpump controller begins to oscillate requiring manual control or shift to other TDRFP.
6		MALL	Partial ATWS (several control rods fail to insert).
7		C BOP/SRO	Main Turbine will not trip from the MCR
8		C RO/SRO	CRD pump trips following scram attempt and cannot be restarted until suction filter trips are bypassed or filters replaced.

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Facility: LaSalle Co. Station Scenario No.: 3 Op-Test No.: 2006-301

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

Initial Conditions: Approximately 80% RTP;

Turnover: Approximately 80% RTP. MSIV Scram Functional Test has just been completed. RCIC has just been returned to service after a 3 day outage, but pump operability test still needs to be performed. Power will be increased to 100% following completion of RCIC surveillance.

Event No.	Malf. No.	Event Type*	Event Description
1		C (TS) BOP/SRO	RCIC fails pump surveillance.
2		C (TS) RO/SRO	Control rod drift (control rod continues to move out after single notch withdrawal).
3		C (TS) SRO	SRO receives report from system engineer that fuel oil analysis for the common unit diesel generator indicates that fuel oil particulate concentration is out of specification.
4		C BOP/SRO	TDRFP high vibration leading to removal of pump from service.
5		C RO/SRO	CRD flow control valve fails open causing degradation of RR pump seals due to thermal shock.
6		M ALL	Both RR pumps seals sequentially fail resulting in a LOCA. One loop cannot be isolated.
7		C BOP	When HPCS pump is started a water hammer causes a pipe break down stream of the pump (inside the HPCS pump room) that cannot be immediately isolated.
8		MALL	HPCS line break partially drains suppression pool to HPCS room.

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor