
EXAMINATION OUTLINE SUBMITTAL AND NRC COMMENTS

FOR THE LASALLE INITIAL EXAMINATION - MARCH 2005

Outline Submittal
LaSalle County Station
2005 Initial Examination

Exelon Generation Company, LLC
LaSalle County Station
2601 North 21 Road
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November 8, 2004

United States Nuclear Regulatory Commission
Attention: Regional Administrator, Region III
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

LaSalle County Station, Units 1 and 2
Facility Operating License Nos. NPF-11 and NPF-18
NRC Docket Nos. 50-373 and 50-374

Subject: Submittal of Initial Operator Licensing Examination Outline

Enclosed are the examination outlines supporting the Initial License Examination scheduled for the week of March 7, 2005, at LaSalle County Station. This submittal includes all applicable Examination Standard forms and outlines in accordance with NUREG-1021, "Operator Licensing Examination Standards," Revision 9. In accordance with NUREG 1021, Revision 9, Section ES-201, "Initial Operator Licensing Examination Process," please ensure that these materials are withheld from public disclosure until after the examinations are complete.

Should you have any questions concerning this letter, please contact Terrence W. Simpkin at (815) 415-2800. For questions concerning examination materials, please contact John E. Ross at (815) 415-2276.

Respectfully,

Susan R. Landahl for

George P. Barnes
Site Vice President
LaSalle County Station

Enclosures: (Hand delivered to B. Palagi, Chief Examiner, NRC Region III)

cc: NRC Senior Resident Inspector - LaSalle County Station (Without enclosures)

Facility: <u>LASALLE COUNTY STATION</u>		Date of Examination: <u>03/07/2005</u>		
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.	je	HTV	BP
	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.	je	HTV	BP
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	je	HTV	BP
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	je	HTV	BP
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.	je	HTV	BP
	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.	je	HTV	BP
	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.	je	HTV	BP
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.	je	HTV	BP
	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	je	HTV	BP
	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.	je	HTV	BP
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.	je	HTV	BP
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	je	HTV	BP
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	je	HTV	BP
	d. Check for duplication and overlap among exam sections.	je	HTV	BP
	e. Check the entire exam for balance of coverage.	je	HTV	BP
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	je	HTV	BP
a. Author	<u>John E. Ross</u> / <u>John E. Ross</u>	Date: <u>10/29/2004</u>		
b. Facility Reviewer (*)	<u>HAROLD VINYARD</u> / <u>Harold Vinyard</u>	<u>11/01/04</u>		
c. NRC Chief Examiner (#)	<u>BRUCE PALAGI</u> / <u>Bruce Palagi</u>	<u>11-16-04</u>		
d. NRC Supervisor *	<u>B Palagi For RDL</u> / <u>Bruce Palagi</u>	<u>4-12-05</u>		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.				

* reviewed with Super prior to discussion with author

BBP

Facility: <u>LaSalle County Station</u>		Date of Examination: <u>03/07/2005</u>
Examination Level: <u>SRO</u>		Operating Test Number: <u>2003-01</u>
Administrative Topic (See Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M	Create and Place an Equipment Status Tag (EST) on the Main Steam Line (MSL) Radiation Monitor Recorder 2.1.15 2.3/3.0
Conduct of Operations	P	Review A New Case Core Performance Log and Report findings to the Shift Manager (Similar to previous NRC Exam item.) 2.1.25 2.8/3.1
Equipment Control	D	Review Completed Surveillance and Determine any Action Requirements 2.2.12 2.6/3.0
Radiation control	N	Given a Radiation Survey Map, Determine Correct Area Posting Requirements 2.3.1 2.2/3.0
Emergency Plan	D	Determine Reportability Requirements per EP-AA-114, for a Shutdown Required By Technical Specifications 2.4.30 2.2/3.6
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 (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1 ; randomly selected) (S)imulator		

Facility: <u>LaSalle County Station</u>		Date of Examination: <u>03/07/2005</u>
Examination Level: <u>SRO (see NOTE at bottom of page)</u>		Operating Test Number: <u>2003-01</u>
Control Room Systems * (8 for RO, 7 for SRO-I; 2 or 3 for SRO-U)		
System / JPM Title	Type Code**	Safety Function
a. Downshift RR Pumps to Slow Speed with One Pump Tripping to Off	A, D, S	1 202001
b. Initiate RCIC for Level Control with Failure of 1E51-F046 to Automatically Open	A, E, N, S	2 217000
c. Manually Initiate Low-Low-Set (LLS) and then Reset LLS as Directed by the Unit Supervisor	N, S	3 239002
d. Shutdown High Pressure Core Spray (HPCS) After an Automatic Initiation with High Drywell Pressure Present	N, L, S	4 209002
e. Start Containment Spray with a Failure of the Second Valve to Open	A, E, L, N, S	5 226001
f. Perform LOS-DG-M3 (1B DG) with a Loss of the SAT	A, D, P, S	6 264000
g. Reset a Half-Scram with a Blown Group Scram Fuse	A, N, S	7 212000
h. Not Applicable	N/A	N/A
In-Plant Systems * (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. In-Plant Actions to Lineup Cycled Condensate (CY) to Low Pressure Coolant Injection (LPCI) for Vessel Injection	D, E, L, R	2 203000
j. Hydraulically Isolate an Inoperable Control Rod Drive (CRD) Hydraulic Control Unit (HCU)	D, R	1 201001
k. Locally Start the 0A VE Charcoal Filter	N, R	9 290003
* 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	≤9 / ≤8 / ≤4	
(E)mergency or abnormal in-plant	≥1 / ≥1 / ≥1	
(L)ow-Power	≥1 / ≥1 / ≥1	
(N)ew or (M)odified from bank including 1(A)	≥2 / ≥2 / ≥1	
(P)revious 2 exams	≤3 / ≤3 / ≤2 (randomly selected)	
(R)CA	≥1 / ≥1 / ≥1	
(S)imulator		

NOTE: SRO-I will perform all 10 JPMs and SRO-U will perform the following five JPMs: d. (ESF), e., f., i., and j.

Facility: <u>LaSalle County Station</u>		Date of Exam: <u>03/07/2005</u>											Operating Test No.: <u>2003-01</u>			
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					
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION					
		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			
SRO-I	RX		1											1	1*	
	NOR	1												1	1*	
	I/C	2/3/4	3/4											5	4*	
	MAJ	5	5											2	2	
	TS	2/4												2	2	
SRO-I	RX					6								1	1*	
	NOR				1	1								2	1*	
	I/C				2/3/5	3/5								5	4*	
	MAJ				7/8	7/8								4	2	
	TS				2/4									2	2	
SRO-I	RX								1					1	1*	
	NOR							1						1	1*	
	I/C							2/3	2/3					4	4*	
	MAJ							5/6	5/6					4	2	
	TS							3/4						2	2	
RO SRO-I SRO-U	RX														1*	
	NOR														1*	
	I/C														4*	
	MAJ														2	
	TS														2	

Instructions:

1. Circle 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 requirement.

NOTE: Can use any one of the 3 scenarios for the SRO-U in the SRO position.

Author:

John E. Ross

NRC Reviewer:

Bruce Kelly

Facility Name: LaSalle County Station Date of Exam: March 07, 2005																		
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 & Abnormal Plant Evolutions	1	4	3	4	N/A			3	3	N/A			3	20	3	4	7	
	2	1	1	1	N/A			2	1	N/A			1	7	1	2	3	
	Tier Totals	5	4	5	N/A			5	4	N/A			4	27	4	6	10	
2. Plant Systems	1	3	4	2	1	1	2	2	2	3	4	2	26	3	2	5		
	2	1	0	2	1	2	1	1	1	1	1	1	12	2*	1	3		
	Tier Totals	4	4	4	2	3	3	3	3	4	5	3	38	5	3	8		
3. Generic Knowledge and Abilities Categories				1		2		3		4		10		1	2	3	4	7
				2		3		3		2				2	2	1	2	

- 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).
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 RO exam must total 75 points and the SRO-only exam must total 25 points.
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.
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.
5. 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.
6. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
- 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.
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. Use duplicate pages for RO and SRO-only exams.
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.

* INCLUDES ONE ITEM FROM 23400 FUEL HANDLING EQUIPMENT (A1.D2)

ES-401	BWR Examination Outline							Form ES-401-1	
Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO)									
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 1						Natural circulation	3.5	1
295003 Partial or Complete Loss of AC / 6		0 6					D.C. electrical loads	3.4	1
295004 Partial or Total Loss of DC Pwr / 6			0 3				Reactor SCRAM Plant-Specific	3.1	1
295005 Main Turbine Generator Trip / 3				0 2			RPS	3.6	1
295006 SCRAM / 1			0 1		0 2		Reactor water level response, Control rod position	3.8; 4.3	2
295016 Control Room Abandonment / 7						01.3 2	Ability to explain and apply system limits and precautions.	3.4	1
295018 Partial or Total Loss of CCW / 8	0 1						Effects on component/system operations	3.5	1
295019 Partial or Total Loss of Inst. Air / 8		0 6					Offgas system	2.8	1
295021 Loss of Shutdown Cooling / 4			0 2				Feeding and bleeding reactor vessel	3.3	1
295023 Refueling Acc / 8				0 2			Fuel pool cooling and cleanup system	2.9	1
295024 High Drywell Pressure / 5					0 1		Drywell pressure	4.2	1
295025 High Reactor Pressure / 3						02.2 2	Knowledge of limiting conditions for operations and safety limits.	3.4	1
295026 Suppression Pool High Water Temp. / 5	0 1						Pump NPSH	3	1
295027 High Containment Temperature / 5							SUPPRESSED		0
295028 High Drywell Temperature / 5		0 3					Reactor water level indication	3.6	1
295030 Low Suppression Pool Wtr Lvl / 5			0 7				NPSH considerations for ECCS pumps	3.5	1
295031 Reactor Low Water Level / 2				0 8			Alternate injection systems: Plant-specific	3.8	1
295037 SCRAM Condition Present and Power Above APRM Downscale or Unknown / 1					0 1		Reactor power	4.2	1
295038 High Off-site Release Rate / 9						01.1 4	Knowledge of system status criteria which require the notification of plant personnel.	2.5	1
600000 Plant Fire On Site / 8	0 1						Fire Classifications by type	2.5	1
K/A Category Totals:	4	3	4	3	3	3	Group Point Total:		20

ES-401	BWR Examination Outline							Form ES-401-1	
Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO)									
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									0
295007 High Reactor Pressure / 3									0
295008 High Reactor Water Level / 2									0
295009 Low Reactor Water Level / 2									0
295010 High Drywell Pressure / 5									0
295011 High Containment Temp / 5							SUPPRESSED		0
295012 High Drywell Temperature / 5									0
295013 High Suppression Pool Temp. / 5									0
295014 Inadvertent Reactivity Addition / 1 <i>(21)</i>				0 7			Cold water injection	4	1
295015 Incomplete SCRAM / 1									0
295017 High Off-site Release Rate / 9									0
295020 Inadvertent Cont. Isolation / 5 & 7 <i>(22)</i>					0 5		Reactor water level	3.6	1
295022 Loss of CRD Pumps / 1 <i>(23)</i>						01. 23	Ability to perform specific system and integrated plant procedures during different modes of plant operation.	3.9	1
295029 High Suppression Pool Wtr Lvl / 5									0
295032 High Secondary Containment Area Temperature / 5 <i>(24)</i>	0 4						Impact of operating environment on components	3.1	1
295033 High Secondary Containment Area Radiation Levels / 9 <i>(25)</i>		0 2					Process radiation monitoring system	3.8	1
295034 Secondary Containment Ventilation High Radiation / 9									0
295035 Secondary Containment High Differential Pressure / 5 <i>(26)</i>			0 2				Secondary containment ventilation response	3.3	1
295036 Secondary Containment High Sump/Area Water Level / 5 <i>(27)</i>				0 2			Affected systems so as to isolate damaged portions	3.5	1
500000 High CTMT Hydrogen Conc. / 5									0
K/A Category Totals:	1	1	1	2	1	1	Group Point Total:		7

ES-401	BWR Examination Outline Plant Systems - Tier 2/Group 1 (RO)													Form ES-401-1	
E/APE # / Name / Safety Function	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 <i>38</i>		0 1										Pumps	3.5	1	
205000 Shutdown Cooling Mode <i>39</i>			0 2									Reactor water level: Plant-Specific	3.2	1	
206000 HPCI												SUPPRESSED		0	
207000 Isolation (Emergency) Condenser												SUPPRESSED		0	
209001 LPCS <i>32</i> <i>(31)</i>		0 3				0 3						Initiation logic ; Torus/suppression pool water level	2.9; 3.3	2	
209002 HPCS <i>(32)</i> <i>(33)</i>		0 3					0 8					Water leg (jockey) pump: BWR-5, 6; System lineup BWR-5, 6	3; 3.1	2	
211000 SLC <i>(34)</i>								0 1				Pump trip	3.5	1	
212000 RPS <i>(35)</i>									0 2			Individual system relay status: Plant-Specific	3.2	1	
215003 IRM <i>(36)</i>										0 4		IRM back panel switches, meters, and indicating lights	3.1	1	
215004 Source Range Monitor <i>(37)</i>											02. 22	Knowledge of limiting conditions for operations and safety limits.	3.4	1	
215005 APRM / LPRM <i>(38)</i>		0 7								0 4		Process computer, performance monitoring system; LPRM back panel switches, meters and indicating lights	2.6; 3.2	2	
217000 RCIC <i>(40)</i>		0 1										Motor operated valves	2.8	1	
218000 ADS <i>(41)</i>			0 1							0 2		Restoration of reactor water level after a break that does not depressurize the reactor when required; ADS valve tail pipe temperatures	4.4; 3.6	2	
223002 PCIS/Nuclear Steam Supply Shutoff <i>(42)</i>				0 1								Redundancy	3	1	
239002 SRVs <i>(43)</i>					0 5							Discharge line quencher operation	2.6	1	
259002 Reactor Water Level Control <i>(44)</i>						0 2						A.C. power	3.3	1	
261000 SGTS <i>(45)</i> <i>(47)</i>							0 2			0 7		Primary containment pressure; System flow	3.1; 3.1	2	
262001 AC Electrical Distribution <i>(46)</i>								0 2				Loss of coolant accident	3.6	1	
262002 UPS (AC/DC) <i>(48)</i>									0 1			Transfer from preferred to alternate source	2.8	1	
263000 DC Electrical Distribution <i>(49)</i>										0 3		Battery discharge rate: Plant-Specific	2.7	1	
264000 EDGs <i>(50)</i>											01. 30	Ability to locate and operate components, including local controls.	3.9	1	
300000 Instrument Air <i>(51)</i>		0 5										Main Steam Isolation Valve air	3.1	1	
400000 Component Cooling Water <i>(52)</i>		0 1										CCW pumps	2.9	1	
K/A Category Totals:	3	4	2	1	1	2	2	2	3	4	2	Group Point Total:		26	

ES-401	BWR Examination Outline													Form ES-401-1	
Plant Systems - Tier 2/Group 2 (RO)															
E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	IR	#	
201001 CRD Hydraulic														0	
201002 RMCS														0	
201003 Control Rod and Drive Mechanism (54)			0									Reactor power	3.2	1	
201004 RSCS												SUPPRESSED		0	
201005 RCIS														0	
201006 RWM (55)					1	1						Insert error: P-Spec(Not-BWR6)	3.2	1	
202001 Recirculation														0	
202002 Recirculation Flow Control (56)						0						Recirculation system	2.8	1	
204000 RWCU														0	
214000 RPIS (57)			0									RWM: Plant-Specific	3	1	
215001 Traversing In-core Probe														0	
215002 RBM														0	
216000 Nuclear Boiler Inst. (58)						0	4					System venting	2.6	1	
219000 RHR/LPCI: Torus/Pool Cooling Mode (59)								1	6			High suppression pool level	2.9	1	
223001 Primary CTMT and Aux. (60)									0	4		Containment/drywell response during LOCA	4.2	1	
226001 RHR/LPCI: CTMT Spray Mode														0	
230000 RHR/LPCI: Torus/Pool Spray Mode														0	
233000 Fuel Pool Cooling/Cleanup														0	
234000 Fuel Handling Equipment														0	
239001 Main and Reheat Steam (61)										0	2	Main steam line drain valves	3.2	1	
239003 MSIV Leakage Control														0	
241000 Reactor/Turbine Pressure Regulator														0	
245000 Main Turbine Gen. / Aux.														0	
256000 Reactor Condensate (62)										04	06	Knowledge symptom based EOP mitigation strategies.	3.1	1	
259001 Reactor Feedwater														0	
268000 Radwaste (63)			0									Drywell equipment drains	2.9	1	
271000 Offgas														0	
272000 Radiation Monitoring														0	
286000 Fire Protection														0	
288000 Plant Ventilation (64)					0	2						Differential pressure control	3.2	1	
290001 Secondary CTMT														0	
290003 Control Room HVAC														0	
290002 Reactor Vessel Internals (65)					0	3						Core orificing	3.2	1	
K/A Category Totals:	1	0	2	1	2	1	1	1	1	1	1	Group Point Total:		12	

ES-401		BWR Examination Outline							Form ES-401-1	
Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (SRO)										
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	
295003 Partial or Complete Loss of AC / 6 <i>(76)</i>						04. 04	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.3	1	
295004 Partial or Total Loss of DC Pwr / 6 <i>(77)</i>					0 2		Extent of partial or complete loss of D.C. power	3.9	1	
295005 Main Turbine Generator Trip / 3									0	
295006 SCRAM / 1									0	
295016 Control Room Abandonment / 7 <i>(78)</i>						02. 25	Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	3.7	1	
295018 Partial or Total Loss of CCW / 8									0	
295019 Partial or Total Loss of Inst. Air / 8									0	
295021 Loss of Shutdown Cooling / 4 <i>(79)</i>					0 5		Reactor vessel metal temperature	3.3	1	
295023 Refueling Acc / 8 <i>(80)</i>						04. 04	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.3	1	
295024 High Drywell Pressure / 5									0	
295025 High Reactor Pressure / 3									0	
295026 Suppression Pool High Water Temp. / 5									0	
295027 High Containment Temperature / 5							SUPPRESSED		0	
295028 High Drywell Temperature / 5 <i>(81)</i>						01. 32	Ability to explain and apply system limits and precautions.	3.8	1	
295030 Low Suppression Pool Wtr Lvl / 5									0	
295031 Reactor Low Water Level / 2 <i>(82)</i>					0 2		Reactor power	4.2	1	
295037 SCRAM Condition Present and Power Above APRM Downscale or Unknown / 1									0	
295038 High Off-site Release Rate / 9									0	
600000 Plant Fire On Site / 8									0	
K/A Category Totals:	0	0	0	0	3	4	Group Point Total:		7	

ES-401	BWR Examination Outline							Form ES-401-1	
Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (SRO)									
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									0
295007 High Reactor Pressure / 3									0
295008 High Reactor Water Level / 2									0
295009 Low Reactor Water Level / 2 (72)						0 3	Reactor water cleanup blowdown rate	2.9	1
295010 High Drywell Pressure / 5 (84)						01. 02	Knowledge of operator responsibilities during all modes of plant operation.	4	1
295011 High Containment Temp / 5							SUPPRESSED		0
295012 High Drywell Temperature / 5									0
295013 High Suppression Pool Temp. / 5									0
295014 Inadvertent Reactivity Addition / 1									0
295015 Incomplete SCRAM / 1									0
295017 High Off-site Release Rate / 9									0
295020 Inadvertent Cont. Isolation / 5 & 7									0
295022 Loss of CRD Pumps / 1									0
295029 High Suppression Pool Wtr Lvl / 5									0
295032 High Secondary Containment Area Temperature / 5									0
295033 High Secondary Containment Area Radiation Levels / 9 (85)						01. 30	Ability to locate and operate components, including local controls 2.4, 6	3.4	1
295034 Secondary Containment Ventilation High Radiation / 9									0
295035 Secondary Containment High Differential Pressure / 5									0
295036 Secondary Containment High Sump/Area Water Level / 5									0
500000 High CTMT Hydrogen Conc. / 5									0
K/A Category Totals:	0	0	0	0	1	2	Group Point Total:		3

ES-401	BWR Examination Outline											Form ES-401-1		
Plant Systems - Tier 2/Group 1 (SRO)														
E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	IR	#
203000 RHR/LPCI: Injection														0
205000 Shutdown Cooling Mode														0
206000 HPCI												SUPPRESSED		0
207000 Isolation (Emergency) Condenser												SUPPRESSED		0
209001 LPCS 80								0	3			A.C. failures	3.6	1
209002 HPCS														0
211000 SLC														0
212000 RPS 77												04.30 Knowledge of which events related to system operations/status should be reported to outside agencies	3.6	1
215003 IRM														0
215004 Source Range Monitor														0
215005 APRM / LPRM														0
217000 RCIC														0
218000 ADS														0
223002 PCIS/Nuclear Steam Supply Shutoff														0
239002 SRVs														0
259002 Reactor Water Level Control														0
261000 SGTS 89								0	5			Fan trips	3.1	1
262001 AC Electrical Distribution														0
262002 UPS (AC/DC)														0
263000 DC Electrical Distribution														0
264000 EDGs												2.4.4		0
300000 Instrument Air 89												04.04 Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures	4.3	1
400000 Component Cooling Water 90								0	3			High/Low CCW temperature	3	1
K/A Category Totals:	0	0	0	0	0	0	0	0	3	0	0	2	Group Point Total:	5

ES-401	BWR Examination Outline													Form ES-401-1	
Plant Systems - Tier 2/Group 2 (SRO)															
E/APE # / Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)		IR	#
201001 CRD Hydraulic															0
201002 RMCS															0
201003 Control Rod and Drive Mechanism															0
201004 RSCS													SUPPRESSED		0
201005 RCIS															0
201006 RWM															0
202001 Recirculation															0
202002 Recirculation Flow Control 91													01. Knowledge of operator responsibilities during all modes of 02. plant operation.	4	1
204000 RWCU															0
214000 RPIS															0
215001 Traversing In-core Probe															0
215002 RBM															0
216000 Nuclear Boiler Inst. 92									0				Reference leg flashing	3.5	1
219000 RHR/LPCI: Torus/Pool Cooling Mode															0
223001 Primary CTMT and Aux.															0
226001 RHR/LPCI: CTMT Spray Mode															0
230000 RHR/LPCI: Torus/Pool Spray Mode															0
233000 Fuel Pool Cooling/Cleanup															0
234000 Fuel Handling Equipment 93								X				0	Refuel floor radiation levels/ airborne levels	3.8	1
239001 Main and Reheat Steam															0
239003 MSIV Leakage Control															0
241000 Reactor/Turbine Pressure Regulator															0
245000 Main Turbine Gen. / Aux.															0
256000 Reactor Condensate															0
259001 Reactor Feedwater															0
268000 Radwaste															0
271000 Offgas															0
272000 Radiation Monitoring															0
286000 Fire Protection															0
288000 Plant Ventilation															0
290001 Secondary CTMT															0
290003 Control Room HVAC															0
290002 Reactor Vessel Internals															0
K/A Category Totals	0	0	0	0	0	0	0	1	1	0	0	1	Group Point Total:		3

Facility Name: LaSalle County Station Date of Exam: March 07, 2005

Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
1. Conduct of Operations <i>63</i> <i>94</i> <i>95</i>	2.1. 01	Knowledge of conduct of operations requirements.	3.7	1	3.8	
	2.1. 31	Ability to locate control room switches, controls and indications and to determine that they are correctly reflecting the desired plant lineup.	4.2	1	3.9	
	2.1. 11	Knowledge of less than one hour technical specification action statements for systems.	3		3.8	1
	2.1. 30	Ability to locate and operate components, including local controls	3.9		3.4	1
	2.1.	<i>2.1.13</i>				
	2.1.					
	Subtotal			2		2
2. Equipment Control <i>96</i> <i>97</i>	2.2. 11	Knowledge of the process for controlling temporary changes. <i>65</i>	2.5	1	3.4	
	2.2. 25	Knowledge of bases in technical specifications for limiting conditions for operations and safety limits. <i>2.2.12 = 64</i>	2.5	1	3.7	
	2.2. 28	Knowledge of new and spent fuel movement procedures. <i>70</i>	2.6	1	3.5	
	2.2. 13	Knowledge of tagging and clearance procedures. <i>73</i>	3.6		3.8	1
	2.2. 20	Knowledge of the process for managing troubleshooting activities.	2.2		3.3	1
	2.2.					
	Subtotal			3		2
3. Radiation Control <i>99</i>	2.3. 01	Knowledge of 10 CFR 20 and related facility radiation control requirements. <i>71</i>	2.6	1	3	
	2.3. 04	Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized. <i>72</i>	2.5	1	3.1	
	2.3. 10	Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.	2.9	1	3.3	
	2.3. 02	Knowledge of facility ALARA program.	2.5		2.9	1
	2.3.					
	2.3.					
	Subtotal			3		1
4. Emergency Procedures / Plan <i>100</i>	2.4. 01	Knowledge of EOP entry conditions and immediate action steps. <i>74</i>	4.3	1	4.6	
	2.4. 34	Knowledge of RO tasks performed outside the main control room during emergency operations including system geography and system implications.	3.8	1	3.6	
	2.4. 22	Knowledge of the bases for prioritizing safety functions during abnormal/emergency operations.	3		4	1
	2.4. 40	Knowledge of the SRO's responsibilities in emergency plan implementation.	2.3		4	1
	2.4.	<i>2.4.43</i>				
	2.4.					
	Subtotal			2		2
Tier 3 Point Total				10		7

Facility: LaSalle County Station Scenario No.: Scenario-01 Op Test No.: 2003-01 NRC Exam

Examiners: _____ Operators: _____

Initial Conditions:

- Ramping to full power following a unit startup
- Rated Rod Line with core flow at ~85 Mlbm/hour

Turnover:

- Continue the power ramp per the QNE's request

Event No.	Malf. No.	Event Type*		Event Description
1.	N/A	(R) (N)	RO SRO	Increase Power per the QNE, using RR Flow Control Supervises crew activities
2.	k1n24bnm r05 63	(C) (C)	BOP SRO	RCIC Drain Pot Failure Technical Specification Determination
3.	mrd280	(C)	RO SRO	CRD Pump trips/Start standby CRD pump Directs actions per the annunciator and normal procedures
4.	mnb059	(I) (I)	RO SRO	Instrument Line Break (1C NR, RR ΔT, & HP Lvl-8) Technical Specification Determination
5.	mrc041	(M) (M)	RO SRO	LOCA in the Drywell, with loss of High Pressure Injection sources. Automatic Scram Failure, manual scram works. LGA Entry Conditions

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

Narrative Summary NRC Scenario-01:

Event	Description
1.	Initial conditions have the plant completing a startup, LGP-3-1 is in progress. Power is approximately 93% RTP. The examinees are directed to continue ramping power to 100% using Reactor Recirculation Flow Control Valves.
2.	The RCIC drain pot high level alarm will annunciate. The examinees will recognize that the drain bypass valve 1E51-F054 has automatically opened. Following the annunciator procedure, when the high level alarm does NOT clear, they will have to close the RCIC Trip and Throttle Valve 1E51-F360. This will render the RCIC system inoperable and the Unit Supervisor will have to make a Technical Specification determination.
3.	The running CRD Pump will trip. Per the annunciator procedure, the NSO will verify that Charging Water Pressure is greater than 500 psig, and then start the standby CRD pump, and follow up with normal operating procedure.
4.	An instrument line reference leg will rupture in the reactor building. Among other indications, this will cause the 1A RR Pump Low Differential Temperature timer will initiate. By procedure, the NSO will bypass this timer. The Unit Supervisor will have to make another Technical Specification determination.
5.	For this event a Reactor Recirculation line will break causing LOCA conditions in the Drywell. Automatic RPS Scram will fail however manual actions to scram will be successful. The Unit Supervisor will enter the EOPs and take actions to control Reactor Water Level and Drywell Pressure. The MDRFP trips shortly after starting. Bus 143 trips on overcurrent. RCIC is not available from an earlier event. This will require a blowdown for level control.
Termination	The scenario can be terminated when the examinees have RPV and Containment parameters stable and under control.

Critical Steps:

1. Manually scram the reactor when automatic setpoint is exceeded.
2. Perform a blowdown per the EOPs when level cannot be restored and maintained above -150 inches.

Facility: LaSalle County Station Scenario No.: Scenario-02 Op Test No.: 2003-01 NRC Exam

Examiners: _____ Operators: _____

Initial Conditions:

- Ramping to full power following a unit startup
- Full power with flow backed off to ~85 Mlbm/hour

Turnover:

- Start the 1B CRD, shutdown 1A CRD for oil change
- Continue the power ramp to 100% power per the QNE

Event No.	Malf. No.	Event Type*		Event Description
1.	N/A	(N) (N)	RO SRO	Swap running CRD pumps
2.	r0601	(C)	RO SRO	Low ADS Bottle Bank Nitrogen Pressure Technical Specification Determination
3.	various overrides	(C) (C)	RO SRO	1B TDRFP Seal Injection Pump trips and standby fails to start
4.	zc11025	(C)	RO SRO	CRD Accumulator Trouble Alarm (low pressure) Technical specification Determination
5.	k6k07wt8	(C) (C)	RO SRO	Loss of 4160 vac Bus 141X
6.	N/A	(R) (C)	RO SRO	Reduced of Heater Drain Pump Forward
7.	mrc033	(M) (M)	RO SRO	Recirculation loop rupture – LOCA conditions in the Drywell
8.	mrp018	(C) (C)	RO SRO	B RPS Fails to scram (Electrical ATWS)

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

Narrative Summary NRC Scenario-02:

Event	Description
1.	This event is a normal swap of the running CRD pump (from 1A to 1B) per the procedure.
2.	Drywell pneumatic trouble alarm is received, an NLO is send to investigate. The NLO reports back to the control room that the South Bottle bank pressure is actually below the alarm setpoint. The Unit Supervisor is expected to make a Technical Specification determination.
3.	The running TDRFP Seal Injection Pump will trip and the standby pump will fail to automatically start. The NSO will take actions per the annunciator procedure.
4.	Next a CRD HCU Accumulator will alarm. The examinees are expected to dispatch an NLO to the effected HCU. The NLO reports that the accumulator has low pressure. The Unit Supervisor is expected to declare the accumulator inoperable and make a Technical Specification determination.
5.	Bus 141X will trip. This causes loss of two Heater Drain pumps. The NSO is expected to start the standby Heater Drain pump.
6.	The examinees are expected to enter LOA-HD-101 and reduce power. If this is not done before Heater Drain Tank level increases to 9-feet the HD Flushing valves will open and the Feedwater Pumps will trip on low suction pressure.
7.	Next a LOCA will develop in the Drywell. The event is entered when directed by the lead examiner or immediately if the reactor automatically scrams due to loss of Feedwater. The examinees are expected to enter the EOP based on RPV Level and Containment Pressure.
8.	This event is an electrical ATWS when RPS B fails to trip when required. The examinees are expected to enter LGA-010 and LGA-NB-01 and take actions to shutdown the reactor. When the first fuse is pulled rods will start to move however the SDV will fill and they will have to reset the scram, drain the SDV and re-scram reactor to get rods to go full-in.
Termination	Scenario can be terminated when the examinees have RPV and Containment parameters stable and under control.

Critical Steps:

1. Reduce power per the abnormal operating procedure to prevent a loss of Feedwater and resulting scram following loss of 141X.
2. Use multiple methods per EOP Support procedure to insert control rods during an ATWS.

Facility: LaSalle County Station Scenario No.: Scenario-03 Op Test No.: 2003-01 NRC Exam

Examiners: _____ Operators: _____

Initial Conditions:

- Startup in progress per LGP-1-1
- Ready to roll the main turbine
- Reactor Power is <20%

Turnover:

- Continue to pull rods per the sequence package

Event No.	Malf. No.	Event Type*		Event Description
1.	N/A	(R) (N)	RO SRO	Continue pulling control rods per the sequence package
2.	mrd031	(C) (C)	RO SRO	Stuck control rod, moves after increasing Drive Water pressure
3.	mrd177	(I) (I)	RO SRO	Loss of RPIS indication for rod 58-43 at notch 12 Technical Specification Determination
4.	mrm017		RO SRO	Failure of 1C VR Fuel Pool Exhaust Radiation Monitor upscale Technical Specification Determination
5.	mcn002 mrd212 mrd218 mrd213	(M) (M)	RO SRO	Off-Gas suction rupture and loss of vacuum and manual scram, 3 stuck rods (ATWS), manually drive rods in
6.	mnb105 mca008	(M) (M)	RO SRO	Small Steam LOCA with containment bypass path

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

Narrative Summary NRC Scenario-03:

Event	Description
1.	The RO will continue to pull control rods per the startup sequence package.
2.	One control rod is discovered to be stuck. Several attempts to free the rod using the normal operating procedure (LOP) will fail. The LOP will direct the operator to take actions per the abnormal operating procedure. When drive water pressure is increased sufficiently, the rod will free itself. And the startup can continue.
3.	While pulling a control rod one of its RPIS reed switches will fail at the final withdrawal position. The crew will take actions per the abnormal operating procedure and the SRO will make a Technical Specification determination.
4.	One of the four Reactor Building Ventilation Fuel Pool Exhaust Radiation Monitors fails upscale. This will cause an annunciator to alarm in the control room. The Unit Supervisor is expected to make a Technical Specification determination.
5.	A rupture in the Off-Gas 2 nd Stage Air Ejector line will cause a slow loss of vacuum. The crew will have time to dispatch operators to look for air leakage into the main condenser. The size of the leak continues to increase until the crew is forced to manually scram the reactor. When the reactor is scrammed, 3 control rods will stick full-out rendering a low power ATWS. The RO will be able to close the Drive Water Pressure control valve and then manually drive the three control rods full-in.
6.	Next a steam leak LOCA will develop with a containment bypass path.
Termination	The scenario can be terminated when the examinees have RPV and Containment Parameters stable and under control.

Critical Steps:

1. Initiate Suppression Chamber Sprays and Drywell Sprays to control containment parameters
2. Use EOP Support Procedures to insert control rods following the scram.

COMMENTS ON LASALLE 2005 EXAMINATION OUTLINE

Outline Section	Comment and Resolution
Admin Topics	<p>Comment: Be sure that the JPM covering review of a Core Performance Log is clearly different than that given in the previous exam.</p> <p>Resolution: Different initial conditions will be used and different parameters will be out of specification.</p>
Admin Topics	<p>Comment: Be sure that the JPM covering review of a completed surveillance is safety significant.</p> <p>Resolution: JPM required identification of an inop RCIC system.</p>
System JPMs	<p>Comment: Be sure there are no JPMs with only one critical task, and be sure there is safety significance to each JPM.</p> <p>Resolution: To be verified during on site validation.</p>
Written Exam	<p>Discussed how random selection of KAs was done.</p> <p>Resolution: KA selection was random</p>
Written Exam	<p>Discussed not over using 2 out of 2 twice type of question.</p> <p>Resolution: Will be evaluated during written exam review.</p>