OUTLINE SUBMITTAL

FOR THE LASALLE INITIAL EXAMINATION - MAY 2003

OUTLINE:

OPERATING TEST

WRITTEN EXAMINATION

Exelon Generation Company, LLC
LaSalle County Station
2601 North 21st Road
Marseilles, IL 61341-9757

www.exeloncorp.com

Exelon SM
Nuclear

January 21, 2003

10 CFR 55.40

United States Nuclear Regulatory Commission
Attention: Region III Administrator
801 Warrenville Road
Lisle, Il 60532-4351

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 May 19 through May 30, 2003, at LaSalle County Station.

This submittal includes all appropriate Examination Standard forms and outlines in accordance with NUREG-1021, "Operator Licensing Examination Standards," Revision 8, Supplement 1.

In accordance with NUREG –1021, Revision 8, Supplement 1, 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 Mr. Glen Kaegi, Regulatory Assurance Manager, at (815) 415-2800. For questions concerning examination outlines, please contact Mr. Patrick Leheney at (815) 415-2534.

Respectfully,

George P. Barnes

George P. Barnes
Site Vice President
LaSalle County Station

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

List of Suppressed Knowledge and Abilities Statements
Examination Security Agreements (Form ES-201-3)
Administrative Topics Outline (Form ES-301-1)
Control Room Systems and Facility Walk-Through Test Outline (Form ES-301-2)
BWR SRO Written Examination Outline (Forms ES-401-1 and ES-401-5)
BWR RO Written Examination Outline (Forms ES-401-2 and ES-401-5)
Operational Scenarios Outline (Form ES-D-1)
Record of Rejected K/As (Form ES-401-10)

cc: Chief, NRC Operator Licensing Branch (w/o enclosures)
Senior Resident Inspector - LaSalle County Station (w/o enclosures)

Facility: LaSalle Date of Examination: 5/19/03

Examination Level (circle one): (RO) / SRO Operating Test Number: ILT 02-01

	Administrative Topic/Subject Description	Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	A.1.1 Verify Off-site Power Lineup K/A 2.1.31 Importance 3.9/4.2
	Conduct of Operations	A.1.2 Knowledge of Conduct of Operations Requirements K/A 2.1.1 Importance 3.7/3.8
		NRC Active License Maintenance
A.2	Equipment Control	A.2.1 Ability to Track Limiting Conditions for Operations K/A 2.2.23 Importance 2.6/3.8
		Determine T.S Short Duration Timeclock
A.3	Radiological Conditions	A.3.1 Ability to Control Rad Releases K/A 2.3.11 Importance 2.7/3.2
		Determine if Radwaste Discharge Tank Flowrates in Spec.
A.4	Emergency Plan	A.4.1 Reporting Emergencies K/A 2.4.39 Importance 3.3/3.1
		Knowledge of the RO's responsibilities in emergency plan implementation

Facility: LaSalle Date of Examination: 5/19/03

Examination Level (circle one): RO / (SRO) Operating Test Number: ILT 02-01

	Administrative Topic/Subject Description	Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Conduct of Operations	SA.1.1 Determine Reporting Requirements K/A 2.1.14 Importance 2.5/.3.3
		75.02.00 During performance of tasks, apply the administrative requirements of OP-AA-101-102.
	Conduct of Operations	SA.1.2 Review and Determine if Jet Pp. Flow meets Required Flow K/A 2.1.25 Importance 2.8/3.1
		656.020 During performance of tasks, apply the administrative requirements of LOS-AA-S101.
A.2	Equipment Control	SA.2.1 Determine Allowable EOOS Combination K/A 2.1.11 Importance 3.0/3.8
		774.010 Given the proper procedure and a T.S. which requires a time clock for actions, identify and prepare the T.S. actions IAW station procedures.
A.3	Radiological Conditions	SA.3.1 Ability to Control Rad Releases K/A 2.3.11 Importance 2.7/3.2
		Determine if Radwaste Discharge Tank Flowrates in Spec.
A.4	Emergency Plan	SA.4.1 Perform Transfer of Command an Control to the TSC K/A 2.4.38 Importance 2.2/4.0

Facility: LaSalle Date of Examination: 5/19/03

Exam Level (circle one): RO / SRO(I) / SRO(U) Operating Test Number: ILT 02-01

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
a. B.1.a Diesel Generator/LOS-DG-M3 with Loss of SAT	DAS	Electrical
b. B.1.b Reactor Manual Control/Single Rod Insert During an ATWS	DSL	Reactivity Control
c. B.1.c Pri. Cont. Vent. And Purge/ Emergency vent the Pri. Cont. IAW LGA-VQ02	DS	Cont. Integrity
d. B.1.d Nuclear Inst./ Bypass a Failed Local Power Range Monitor	DS	Inst.
e. B.1.e Reactor Recirculation/RR Pump Trip on Downshift	DAS	Heat Removal from Core
f. B.1.f Fuel Pool Cooling and C/U/Lineup to refill the reactor vessel from Fuel Pool Emer. M/U IAW LGA-FC-01	NSL	Radioactivity Release
g. B.1.g Feedwater/TDRFP Surv. With inability to Trip	NAS	Reactor Water Level Control

B.2 Facility Walk-Through

a. B.2.a Reactor Core Isolation Cooling/ Install Jumpers and Lift Leads for LGA-RI-02	D	Reactor Pressure Control
b. B.2.b Process Radiation Monitoring/ Perform the Local actions to S/U the Main Stack WRGM	DR	Radioactivity Releases
c. B.2.c Feedwater Heating/Verification of LP Heater 13A Trip	ADR	Reactor Water Level Control

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow Power, (R)CA

Facility: LaSalle Date of Examination: 5/19/03

Exam Level (circle one): RO / SRO(I) / (SRO(U)) Operating Test Number: ILT 02-01

B.1 Control Room Systems

System / JPM Title	Type Code*	Safety Function
B.1.e RR Pump Trip on Downshift	DAS	Heat Removal from Core
B.1.f Lineup to refill the reactor vessel from Fuel Pool Emer. M/U IAW LGA-FC-01	NSL	Radioactivity Release
B.1.g TDRFP Surv. With inability to Trip	NA	Reactor Water Level Control

B.2 Facility Walk-Through

a.	B.2.a Install Jumpers and Lift Leads for LGA-RI-02	D	Reactor Pressure Control
b.	B.2.b Perform the Local actions to S/U the Main Stack WRGM	DR	Radioactivity Releases

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow Power, (R)CA

ES-401 **BWR SRO Examination Outline** Printed: 01/13/2003

Facility: LaSalle Form ES-401-1

Exam Date: 05/29/2003 **Exam Level:** SRO

Tier	Group	K/A Category Points											Point Total
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	
1. Emergency & Abnormal Plant Evolutions	1	5	4	4				5	4			4	26
	2	3	2	3				3	3			3	17
	Tier Totals	8	6	7				8	7			7	43
2. Plant Systems	1	2	2	2	2	2	2	2	2	2	1	4	23
	2	1	1	1	1	1	2	1	1	1	1	2	13
	3	0	0	1	0	1	0	0	1	0	0	1	4
	Tier Totals	3	3	4	3	4	4	3	4	3	2	7	40
3. Generic Knowledge And Abilities		Cat 1			Cat 2			Cat 3			Cat 4		
		4			4			4			5		17

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).
2. The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by ±1 from that specified in the table based on NRC revisions. The final exam must total 100 points.
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.
4. Systems/evolutions within each group are identified on the associated outline.
5. The shaded areas are not applicable to the category/tier.
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.
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 priorites. Enter the tier totals for each category in the table above.

Facility: LaSalle

BWR SR[illegible]xamination Outline

Printed: 01/[illegible]03

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				AK3.06 - Containment isolation	3.7	1
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
295006	SCRAM / 1					X		AA2.03 - Reactor water level	4.2*	1
295006	SCRAM / 1	X						AK1.01 - Decay heat generation and removal.	3.9	1
295007	High Reactor Pressure / 3	X						AK1.02 - Decay heat generation	3.4	1
295007	High Reactor Pressure / 3			X				AK3.03 - RCIC operation: Plant-Specific	3.5	1
295010	High Drywell Pressure / 5	X						AK1.01 - Downcomer submergence: Mark-I&II	3.4	1
295013	High Suppression Pool Temperature / 5		X					AK2.01 - Suppression pool cooling	3.7	1
295014	Inadvertent Reactivity Addition / 1		X					AK2.05 - Neutron monitoring system	4.1*	1
295015	Incomplete SCRAM / 1			X				AK3.01 - Bypassing rod insertion blocks	3.7	1
295015	Incomplete SCRAM / 1				X			AA1.02 - RPS	4.2*	1
295016	Control Room Abandonment / 7					X		AA2.04 - Suppression pool temperature	4.1	1
295016	Control Room Abandonment / 7				X			AA1.05 - D.C. electrical distribution	2.9	1
295017	High Off-Site Release Rate / 9			X				AK3.04 - Power reduction	3.8	1
295017	High Off-Site Release Rate / 9				X			AA1.02 - Off-gas system	3.7	1

Facility: LaSalle

BWR SR[illegible]xamination Outline

Printed: 01/[illegible]03

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
295023	Refueling Accidents / 8		X					AK2.02 - Fuel pool cooling and cleanup system	3.2	1
295024	High Drywell Pressure / 5						X	2.4.4 - Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.3	1
295025	High Reactor Pressure / 3					X		EA2.06 - Reactor water level	3.8	1
295026	Suppression Pool High Water Temperature / 5	X						EK1.01 - Pump NPSH	3.4	1
295026	Suppression Pool High Water Temperature / 5		X					EK2.02 - Suppression pool spray: Plant-Specific	3.8	1
295030	Low Suppression Pool Water Level / 5				X			EA1.03 - HPCS: Plant-Specific	3.4	1
295031	Reactor Low Water Level / 2					X		EA2.01 - Reactor water level	4.6*	1
295037	SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1	X						EK1.04 - Hot shutdown boron weight: Plant-Specific	3.6	1
295037	SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1				X			EA1.03 - ARI/RPT/ATWS: Plant-Specific	4.1*	1
295038	High Off-Site Release Rate / 9						X	2.2.25 - Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	3.7	1
500000	High Containment Hydrogen Concentration / 5						X	2.2.25 - Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	3.7	1

K/A Category Totals: 5 4 4 5 4 4 **Group Point Total:** 26

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BWR SR[illegible]xamination Outline

Printed: 01/[illegible]03

ES - 401 **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		AA2.05 - Jet pump operability: Not-BWR-1&2	3.4	1
295001	Partial or Complete Loss of Forced Core Flow Circulation / 1						X	2.4.6 - Knowledge symptom based EOP mitigation strategies.	4.0	1
295004	Partial or Complete Loss of D.C. Power / 6			X				AK3.02 - Ground isolation/fault determination	3.3	1
295005	Main Turbine Generator Trip / 3	X						AK1.03 - Pressure effects on reactor level	3.7	1
295005	Main Turbine Generator Trip / 3				X			AA1.01 - Recirculation system: Plant-Specific	3.3	1
295008	High Reactor Water Level / 2	X						AK1.02 - Component erosion/damage	2.8	1
295008	High Reactor Water Level / 2		X					AK2.07 - HPCS: Plant-Specific	3.0	1
295012	High Drywell Temperature / 5					X		AA2.02 - Drywell pressure	4.1	1
295020	Inadvertent Containment Isolation / 5						X	2.1.33 - Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.	4.0	1
295020	Inadvertent Containment Isolation / 5			X				AK3.03 - Drywell/containment temperature response	3.2	1
295028	High Drywell Temperature / 5				X			EA1.04 - Drywell pressure	4.0	1
295029	High Suppression Pool Water Level / 5					X		EA2.02 - Reactor pressure	3.6	1
295029	High Suppression Pool Water Level / 5				X			EA1.04 - RCIC: Plant-Specific	3.5	1

Facility: LaSalle

BWR SR[illegible]xamination Outline

Printed: 01/[illegible]03

ES - 401

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
295032	High Secondary Containment Area Temperature / 5			X				EK3.03 - Isolating affected systems	3.9*	1
295033	High Secondary Containment Area Radiation Levels / 9						X	2.4.30 - Knowledge of which events related to system operations/status should be reported to outside agencies.	3.6	1
295033	High Secondary Containment Area Radiation Levels / 9	X						EK1.02 - Personnel protection	4.2*	1
600000	Plant Fire On Site / 8		X					AK2.01 - Sensors, detectors and valves	2.7	1

K/A Category Totals: 3 2 3 3 3 3 **Group Point Total:** 17

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Facility: LaSalle

ES - 401 **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	2.4.6 - Knowledge symptom based EOP mitigation strategies.	4.0	1
202002	Recirculation Flow Control System / 1			X									K3.03 - Reactor water level	3.4	1
203000	RHR/LPCI: Injection Mode (Plant Specific) / 2											X	2.2.25 - Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	3.7	1
209001	Low Pressure Core Spray System / 2		X										K2.03 - Initiation logic	3.1*	1
209001	Low Pressure Core Spray System / 2							X					A1.07 - Emergency generator loading	3.1	1
209002	High Pressure Core Spray System (HPCS) / 2											X	2.4.30 - Knowledge of which events related to system operations/status should be reported to outside agencies.	3.6	1
211000	Standby Liquid Control System / 1					X							K5.01 - Effects of the moderator temperature coefficient of reactivity on the boron	2.9	1
215004	Source Range Monitor (SRM) System / 7					X							K5.01 - Detector operation	2.6	1
215004	Source Range Monitor (SRM) System / 7											X	2.4.4 - Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.3	1
217000	Reactor Core Isolation Cooling System (RCIC) / 2				X								K4.05 - Prevents radioactivity release to auxiliary/reactor building	3.5	1

Facility: LaSalle

ES - 401 **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
217000	Reactor Core Isolation Cooling System (RCIC) / 2									X			A3.06 - Lights and alarms	3.4	1
223002	Primary Containment Isolation System/Nuclear Steam Supply Shut-Off / 5										X		A4.01 - Valve closures	3.5	1
226001	RHR/LPCI: Containment Spray System Mode / 5						X						K6.10 - †Suppression chamber to drywell vacuum breakers: Mark-1-II	3.5	1
239002	Relief/Safety Valves / 3	X											K1.07 - Suppression pool	3.8	1
239002	Relief/Safety Valves / 3									X			A3.06 - Reactor pressure	4.1*	1
259002	Reactor Water Level Control System / 2						X						K6.02 - A.C. power	3.4	1
259002	Reactor Water Level Control System / 2							X					A1.02 - Reactor feedwater flow	3.5	1
262001	A.C. Electrical Distribution / 6	X											K1.04 - Uninterruptible power supply	3.4	1
262001	A.C. Electrical Distribution / 6		X										K2.01 - Off-site sources of power	3.6	1
264000	Emergency Generators (Diesel/Jet) / 6			X									K3.01 - Emergency core cooling systems	4.4*	1
264000	Emergency Generators (Diesel/Jet) / 6								X				A2.04 - Consequences of operating under/over excited	3.0	1

Facility: LaSalle

ES - 401 **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
290001	Secondary Containment / 5				X								K4.03 - Fluid leakage collection	2.9	1
290001	Secondary Containment / 5								X				A2.05 - High area temperature	3.3	1
K/A Category Totals:		**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**1**	**4**	**Group Point Total:**		**23**

Facility: LaSalle

ES - 401 **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
202001	Recirculation System / 1		X										K2.01 - Recirculation pumps: Plant-Specific	3.2	1
204000	Reactor Water Cleanup System / 2	X											K1.08 - SBLC	3.8	1
214000	Rod Position Information System / 7											X	2.1.33 - Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.	4.0	1
214000	Rod Position Information System / 7						X						K6.02 - Position indication probe	2.7	1
215002	Rod Block Monitor System / 7			X									K3.01 - Reactor manual control system: BWR-3, 4, 5	3.5	1
230000	RHR/LPCI: Torus/Suppression Pool Spray Mode / 5								X				A2.15 - Loss of coolant accident	4.1	1
245000	Main Turbine Generator and Auxiliary Systems / 4					X							K5.07 - Generator operations and limitations	2.9	1
263000	D.C. Electrical Distribution / 6										X		A4.02 - Battery voltage indicator: Plant-Specific	3.1	1
271000	Offgas System / 9							X					A1.08 - System flow	3.1	1
286000	Fire Protection System / 8											X	2.1.32 - Ability to explain and apply system limits and precautions.	3.8	1
290003	Control Room HVAC / 9				X								K4.01 - System initiations/reconfiguration: Plant-Specific	3.2	1

Facility: LaSalle

ES - 401 **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
290003	Control Room HVAC / 9									X			A3.01 - Initiation/reconfiguration	3.5	1
300000	Instrument Air System (IAS) / 8						X						K6.03 - Temperature indicators	2.7	1

K/A Category Totals: 1 1 1 1 1 2 1 1 1 1 2 **Group Point Total:** 13

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Facility: LaSalle

ES - 401 **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
201003	Control Rod and Drive Mechanism / 1								X				A2.10 - †Excessive SCRAM time for a given drive mechanism	3.4	1
233000	Fuel Pool Cooling and Clean-up / 9											X	2.1.33 - Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.	4.0	1
268000	Radwaste / 9			X									K3.04 - Drain sumps	2.8	1
268000	Radwaste / 9					X							K5.02 - Radiation hazards and ALARA concept	3.6*	1
K/A Category Totals:		**0**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**1**		**Group Point Total:**	**4**

Generic Knowledge and Abilities Outline (Tier 3)

Printed: 01/13/20

BWR SRO Examination Outline

Form ES-401-5

Facility: LaSalle

Generic Category	KA	KA Topic	Imp.	Points
Conduct of Operations	2.1.7	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.	4.4	1
	2.1.5	Ability to locate and use procedures and directives related to shift staffing and activities.	3.4	1
	2.1.9	Ability to direct personnel activities inside the control room.	4.0	1
	2.1.11	Knowledge of less than one hour technical specification action statements for systems.	3.8	1
			Category Total:	4
Equipment Control	2.2.18	Knowledge of the process for managing maintenance activities during shutdown operations.	3.6	1
	2.2.10	Knowledge of the process for determining if the margin of safety, as defined in the basis of any technical specification is reduced by a proposed change, test or experiment.	3.3	1
	2.2.34	Knowledge of the process for determining the internal and external effects on core reactivity.	3.2*	1
	2.2.12	Knowledge of surveillance procedures.	3.4	1
			Category Total:	4
Radiation Control	2.3.6	Knowledge of the requirements for reviewing and approving release permits.	3.1	1
	2.3.8	Knowledge of the process for performing a planned gaseous radioactive release.	3.2	1
	2.3.9	Knowledge of the process for performing a containment purge.	3.4	1
	2.3.2	Knowledge of facility ALARA program.	2.9	1
			Category Total:	4

Generic Knowledge and Abilities Outline (Tier 3)

Printed: 01/13/200

BWR SRO Examination Outline

Form ES-401-5

Facility: LaSalle

Generic Category	KA	KA Topic	Imp.	Points
Emergency Plan	2.4.26	Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.	3.3	1
	2.4.48	Ability to interpret control room indications to verify the status and operation of system, and understand how operator action s and directives affect plant and system conditions.	3.8	1
	2.4.6	Knowledge symptom based EOP mitigation strategies.	4.0	1
	2.4.20	Knowledge of operational implications of EOP warnings, cautions, and notes.	4.0	1
	2.4.35	Knowledge of local auxiliary operator tasks during emergency operations including system geography and system implications.	3.5	1

Category Total: 5

Generic Total: 17

ES-401 **BWR RO Examination Outline** Printed: 01/13/2003

Facility: LaSalle Form ES-401-2

Exam Date: 05/29/2003 **Exam Level:** RO

Tier	Group	K/A Category Points											Point Total
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	
1. Emergency & Abnormal Plant Evolutions	1	5	2	2				3	1			0	13
	2	3	4	4				5	2			1	19
	3	0	1	1				1	0			1	4
	Totals Tier	8	7	7				9	3			2	36
2. Plant Systems	1	3	2	2	3	2	3	3	2	2	2	4	28
	2	2	2	2	2	1	3	2	3	1	1	0	19
	3	0	0	1	0	1	0	0	1	1	0	0	4
	Tier Totals	5	4	5	5	4	6	5	6	4	3	4	51
3. Generic Knowledge And Abilities		Cat 1			Cat 2			Cat 3			Cat 4		
		3			4			2			4		13

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).
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 base on NRC revisions. The final exam must total 100 points.
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.
4. Systems/evolutions within each group are identified on the associated outline.
5. The shaded areas are not applicable to the category /tier.
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.
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 priorites. Enter the tier totals for each category in the table above.

Facility: LaSalle

BWR Re[illegible]amination Outline

Printed: 01/[illegible]03

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-2

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295005	Main Turbine Generator Trip / 3	X						AK1.03 - Pressure effects on reactor level	3.5	1
295005	Main Turbine Generator Trip / 3				X			AA1.01 - Recirculation system: Plant-Specific	3.1	1
295006	SCRAM / 1	X						AK1.01 - Decay heat generation and removal.	3.7	1
295007	High Reactor Pressure / 3	X						AK1.02 - Decay heat generation	3.1	1
295007	High Reactor Pressure / 3			X				AK3.03 - RCIC operation: Plant-Specific	3.4	1
295010	High Drywell Pressure / 5	X						AK1.01 - Downcomer submergence: Mark-I&II	3.0	1
295014	Inadvertent Reactivity Addition / 1		X					AK2.05 - Neutron monitoring system	4.0	1
295015	Incomplete SCRAM / 1			X				AK3.01 - Bypassing rod insertion blocks	3.4	1
295015	Incomplete SCRAM / 1				X			AA1.02 - RPS	4.0	1
295024	High Drywell Pressure / 5		X					EK2.03 - LPCS: Plant-Specific	3.8	1
295031	Reactor Low Water Level / 2					X		EA2.01 - Reactor water level	4.6*	1
295037	SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1	X						EK1.04 - Hot shutdown boron weight: Plant-Specific	3.4	1
295037	SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1				X			EA1.03 - ARI/RPT/ATWS: Plant-Specific	4.1*	1

K/A Category Totals: 5 2 2 3 1 0 **Group Point Total:** 13

Facility: LaSalle

BWR Re..amination Outline

Printed: 01/.. 03

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-2

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				AK3.06 - Containment isolation	3.7	1
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.	3.2	1
295004	Partial or Complete Loss of D.C. Power / 6			X				AK3.02 - Ground isolation/fault determination	2.9	1
295008	High Reactor Water Level / 2	X						AK1.02 - Component erosion/damage	2.8	1
295008	High Reactor Water Level / 2		X					AK2.07 - HPCS: Plant-Specific	2.9	1
295013	High Suppression Pool Temperature / 5		X					AK2.01 - Suppression pool cooling	3.6	1
295016	Control Room Abandonment / 7				X			AA1.05 - D.C. electrical distribution	2.8	1
295017	High Off-Site Release Rate / 9			X				AK3.04 - Power reduction	3.6	1
295017	High Off-Site Release Rate / 9				X			AA1.02 - Off-gas system	3.5	1
295020	Inadvertent Containment Isolation / 5			X				AK3.03 - Drywell/containment temperature response	3.2	1
295020	Inadvertent Containment Isolation / 5					X		AA2.04 - Reactor pressure	3.9	1
295026	Suppression Pool High Water Temperature / 5	X						EK1.01 - Pump NPSH	3.0	1
295026	Suppression Pool High Water Temperature / 5		X					EK2.02 - Suppression pool spray: Plant-Specific	3.6	1

Facility: LaSalle

BWR RO .amination Outline

Printed: 01/1 03

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-2

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295028	High Drywell Temperature / 5				X			EA1.04 - Drywell pressure	3.9	1
295028	High Drywell Temperature / 5					X		EA2.06 - Torus/suppression chamber air space temperature: Plant-Specific	3.4	1
295029	High Suppression Pool Water Level / 5				X			EA1.04 - RCIC: Plant-Specific	3.4	1
295030	Low Suppression Pool Water Level / 5				X			EA1.03 - HPCS: Plant-Specific	3.4	1
295033	High Secondary Containment Area Radiation Levels / 9	X						EK1.02 - Personnel protection	3.9	1
600000	Plant Fire On Site / 8		X					AK2.01 - Sensors, detectors and valves	2.6	1

K/A Category Totals: 3 4 4 5 2 1 **Group Point Total:** 19

Facility: LaSalle

BWR R[illegible]amination Outline

Printed: 01/[illegible]03

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 3

Form ES-401-2

E/APE #	E/APE Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
295021	Loss of Shutdown Cooling / 4						X	2.4.4 - Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.0	1
295023	Refueling Accidents / 8		X					AK2.02 - Fuel pool cooling and cleanup system	2.9	1
295032	High Secondary Containment Area Temperature / 5			X				EK3.03 - Isolating affected systems	3.8	1
295032	High Secondary Containment Area Temperature / 5				X			EA1.03 - Secondary containment ventilation	3.7	1

K/A Category Totals: 0 1 1 1 0 1 **Group Point Total:** 4

BWR RO (ainination Outline

Printed: 01 003

Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 1** **Form ES-401-2**

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									K3.03 - Reactor water level	3.3	1
202002	Recirculation Flow Control System / 1							X					A1.06 - Reactor core flow	3.4	1
209001	Low Pressure Core Spray System / 2		X										K2.03 - Initiation logic	2.9*	1
209001	Low Pressure Core Spray System / 2							X					A1.07 - Emergency generator loading	3.0	1
209002	High Pressure Core Spray System (HPCS) / 2		X										K2.02 - Valve electrical power: BWR-5, 6	2.8	1
209002	High Pressure Core Spray System (HPCS) / 2						X						K6.04 - Suppression pool suction strainer: BWR-5, 6	2.5	1
211000	Standby Liquid Control System / 1					X							K5.01 - Effects of the moderator temperature coefficient of reactivity on the boron	2.7	1
212000	Reactor Protection System / 7										X		A4.09 - SCRAM instrument volume level	3.9	1
212000	Reactor Protection System / 7											X	2.4.50 - Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	3.3	1
215004	Source Range Monitor (SRM) System / 7					X							K5.01 - Detector operation	2.6	1
215004	Source Range Monitor (SRM) System / 7											X	2.4.4 - Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.0	1

Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 1** **Form ES-401-2**

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						K6.02 - D.C. electrical distribution	2.8	1
216000	Nuclear Boiler Instrumentation / 7								X				A2.13 - Instrument isolation valve openings	2.8	1
217000	Reactor Core Isolation Cooling System (RCIC) / 2				X								K4.05 - Prevents radioactivity release to auxiliary/reactor building	3.2	1
217000	Reactor Core Isolation Cooling System (RCIC) / 2									X			A3.06 - Lights and alarms	3.5	1
223001	Primary Containment System and Auxiliaries / 5	X											K1.11 - Post accident sampling system	2.7	1
223002	Primary Containment Isolation System/Nuclear Steam Supply Shut-Off / 5										X		A4.01 - Valve closures	3.6	1
223002	Primary Containment Isolation System/Nuclear Steam Supply Shut-Off / 5				X								K4.05 - Single failures will not impair the function ability of the system	2.9	1
239002	Relief/Safety Valves / 3	X											K1.07 - Suppression pool	3.6	1
239002	Relief/Safety Valves / 3									X			A3.06 - Reactor pressure	4.1*	1
241000	Reactor/Turbine Pressure Regulating System / 3				X								K4.10 - Turbine shell warming: EHC-Only	2.5	1

Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 1** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
241000	Reactor/Turbine Pressure Regulating System / 3											X	2.4.49 - Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.	4.0	1
259001	Reactor Feedwater System / 2											X	2.4.6 - Knowledge symptom based EOP mitigation strategies.	3.1	1
259002	Reactor Water Level Control System / 2						X						K6.02 - A.C. power	3.3	1
259002	Reactor Water Level Control System / 2							X					A1.02 - Reactor feedwater flow	3.6	1
261000	Standby Gas Treatment System / 9	X											K1.07 - Elevated release stack	3.1	1
264000	Emergency Generators (Diesel/Jet) / 6			X									K3.01 - Emergency core cooling systems	4.2*	1
264000	Emergency Generators (Diesel/Jet) / 6								X				A2.04 - Consequences of operating under/over excited	2.9	1

K/A Category Totals: 3 2 2 3 2 3 3 2 2 2 4 **Group Point Total:** 28

Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 2** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
201003	Control Rod and Drive Mechanism / 1								X				A2.10 - †Excessive SCRAM time for a given drive mechanism	3.0	1
202001	Recirculation System / 1		X										K2.01 - Recirculation pumps: Plant-Specific	3.2*	1
204000	Reactor Water Cleanup System / 2	X											K1.08 - SBLC	3.7	1
205000	Shutdown Cooling System (RHR Shutdown Cooling Mode) / 4			X									K3.04 - Recirculation loop temperatures	3.7	1
214000	Rod Position Information System / 7						X						K6.02 - Position indication probe	2.7	1
215002	Rod Block Monitor System / 7			X									K3.01 - Reactor manual control system: BWR-3, 4, 5	3.3	1
219000	RHR/LPCI: Torus/Suppression Pool Cooling Mode / 5							X					A1.09 - Suppression chamber air temperature: Plant-Specific	3.2	1
226001	RHR/LPCI: Containment Spray System Mode / 5						X						K6.10 - †Suppression chamber to drywell vacuum breakers: Mark-1-II	3.3	1
230000	RHR/LPCI: Torus/Suppression Pool Spray Mode / 5								X				A2.15 - Loss of coolant accident	4.0	1
245000	Main Turbine Generator and Auxiliary Systems / 4					X							K5.07 - Generator operations and limitations	2.6	1
262001	A.C. Electrical Distribution / 6	X											K1.04 - Uninterruptible power supply	3.1	1

Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 2** **Form ES-401-2**

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										K2.01 - Off-site sources of power	3.3	1
263000	D.C. Electrical Distribution / 6										X		A4.02 - Battery voltage indicator: Plant-Specific	3.2	1
271000	Offgas System / 9							X					A1.08 - System flow	3.1	1
290001	Secondary Containment / 5				X								K4.03 - Fluid leakage collection	2.8	1
290001	Secondary Containment / 5								X				A2.05 - High area temperature	3.1	1
290003	Control Room HVAC / 9				X								K4.01 - System initiations/reconfiguration: Plant-Specific	3.1	1
290003	Control Room HVAC / 9									X			A3.01 - Initiation/reconfiguration	3.3	1
300000	Instrument Air System (IAS) / 8						X						K6.03 - Temperature indicators	2.7	1

K/A Category Totals: 2 2 2 2 1 3 2 3 1 1 0 **Group Point Total:** 19

Facility: LaSalle

ES - 401 **Plant Systems - Tier 2 / Group 3** **Form ES-401-2**

Sys/Ev #	System / Evolution Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
268000	Radwaste / 9			X									K3.04 - Drain sumps	2.7	1
268000	Radwaste / 9					X							K5.02 - Radiation hazards and ALARA concept	3.1	1
288000	Plant Ventilation Systems / 9									X			A3.01 - Isolation/initiation signals	3.8	1
290002	Reactor Vessel Internals / 5								X				A2.05 - †Exceeding thermal limits	3.7	1
K/A Category Totals:		**0**	**0**	**1**	**0**	**1**	**0**	**0**	**1**	**1**	**0**	**0**		**Group Point Total:**	**4**

Generic Knowledge and Abilities Outline (Tier 3)

Printed: 01/13/20

BWR RO Examination Outline

Form ES-401-5

Facility: LaSalle

Generic Category	KA	KA Topic	Imp.	Points
Conduct of Operations	2.1.9	Ability to direct personnel activities inside the control room.	2.5	1
	2.1.11	Knowledge of less than one hour technical specification action statements for systems.	3.0	1
	2.1.10	Knowledge of conditions and limitations in the facility license.	2.7	1
			Category Total:	**3**
Equipment Control	2.2.34	Knowledge of the process for determining the internal and external effects on core reactivity.	2.8	1
	2.2.12	Knowledge of surveillance procedures.	3.0	1
	2.2.22	Knowledge of limiting conditions for operations and safety limits.	3.4	1
	2.2.30	Knowledge of RO duties in the control room during fuel handling such as alarms from fuel handling area / communication with fuel storage facility / systems operated from the control room in support of fueling operations / and supporting instrumentation.	3.5	1
			Category Total:	**4**
Radiation Control	2.3.9	Knowledge of the process for performing a containment purge.	2.5	1
	2.3.2	Knowledge of facility ALARA program.	2.5	1
			Category Total:	**2**
Emergency Plan	2.4.48	Ability to interpret control room indications to verify the status and operation of system, and understand how operator action s and directives affect plant and system conditions.	3.5	1
	2.4.6	Knowledge symptom based EOP mitigation strategies.	3.1	1
	2.4.20	Knowledge of operational implications of EOP warnings, cautions, and notes.	3.3	1
	2.4.35	Knowledge of local auxiliary operator tasks during emergency operations including system geography and system implications.	3.3	1
			Category Total:	**4**
			Generic Total:	**13**

LaSalle County Station

DYNAMIC SIMULATOR SCENARIO GUIDE

ILT CLASS 02-01 NRC EXAM

ESG 2

Rev. 0

01/05/2003

DEVELOPED BY: _____ _____
Site Exam Developer Date

APPROVED BY: _____ _____
Facility Representative Date

Facility: *LaSalle Station* **Scenario No.:** *ESG 2* **Op Test No.:** _____

Examiners: _____ **Operators:** _____

_____ _____

_____ _____

Initial Conditions:

- *Unit 1 startup is in progress IAW LGP-1-1.*
- *TLO Temperature controller in manual.*
- *1A GC pump is OOS for alignment.*
- *HPCS is OOS to megger and inspect motor.*
- *Online Safety level is green.*
- *Unit 2 is operating at 100% power.*

Turnover:

- *Unit 1 is in a Division 3 work week.*
- *RR pump upshift IAW LOP-RR-05 is scheduled to be performed this shift.*
- *Ready to transfer HD Tank level control to pump forward.*

Event No.	Malf. No.	Event Type*		Event Description
1	N/A	N	BOP SRO	Transfer HD Tank level control to pump forward.
2	N/A	R	RO SRO	Upshift RR pumps during startup.
3	CAEP	I	BOP SRO	HD Tank level controller fails.
4	MCF114	C	BOP SRO	1C HD Pump trips immediately after starting.
5	MRD080	C	RO SRO	Rod drift.
6	MRC029	I	RO SRO	Reactor Recirc FCV drifts closed.
7	MRC041	M	ALL	Reactor Recirculation line break.
8	MNB078		BOP SRO	1B RHR fails to auto initiate.
9	CAEP		BOP SRO	The selected DW spray valve fails to open, the other loops valves will operate.

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

LaSalle County Station

DYNAMIC SIMULATOR SCENARIO GUIDE

ILT CLASS 02-01 NRC EXAM

ESG 3

Rev. 0

1/07/2003

DEVELOPED BY: _____ _____
Site Exam Developer Date

APPROVED BY: _____ _____
Facility Representative Date

Facility: *LaSalle Station* **Scenario No.:** *ESG 3* **Op Test No.:** _____

Examiners: _____ **Operators:** _____

_____ _____

_____ _____

Initial Conditions:

- *Unit 1 is operating at 85% reactor power with flow control line at 107%.*
- *TLO Temperature controller in manual..*
- *1C RHR Pump is OOS for breaker repair.*
- *1B IN Compressor is OOS for lube oil change.*
- *Online Safety level is green.*
- *Unit 2 is operating at 100% power.*

Turnover:

- *Unit 1 is in a Division 2 work week.*
- *LOS-RP-W1 is scheduled to be performed this shift.*
- *A power ascension for load following is also scheduled for this shift.*

Event No.	Malf. No.	Event Type*		Event Description
1	N/A	R	RO SRO	Power ascension to 100% power at 300 MWE/hour.
2	N/A	N	BOP SRO	Complete LOS-RP-W1,Manual Scram Instrumentation.
3	R0563P	I	BOP SRO	RCIC Drain Pot alarm.
4	MAI003	C	BOP SRO	Trip of the running Instrument Nitrogen (IN) compressor.
5	CAEP	C	RO SRO	Trip of running TDRFP seal injection pump with failure of standby pump auto start.
6	MCF072	I	RO SRO	Output signal from the TDRFP A flow transmitter fails .
7	MCA005	M	ALL	Broken Division 1 containment monitoring instrument line.
8	MNB104		ALL	Major steam leak propagates inside the primary containment.

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

LaSalle County Station

DYNAMIC SIMULATOR SCENARIO GUIDE

ILT CLASS 02-01 NRC EXAM

ESG 4

Rev. 0

01/07/2003

DEVELOPED BY: _____ _____
Site Exam Developer Date

APPROVED BY: _____ _____
Chief Examiner Date

Facility: *LaSalle Station* **Scenario No.:** *ESG 4* **Op Test No.:** *(Extra)*

Examiners: _____ **Operators:** _____

_____ _____

_____ _____

Initial Conditions:

- *Unit 1 is operating at 100% reactor power with flow control line at 107%.*
- *TLO Temperature controller in manual.*
- *1A GC Pump OOS*
- *1B EHC Pump OOS.*
- *Online Safety level is green.*
- *Unit 2 is operating at 100% power.*

Turnover:

- *A swap of VP chillers is scheduled to be performed this shift.*

Event No.	Malf. No.	Event Type*		Event Description
1	N/A	R	RO SRO	Power reduction to 85% power at 300 MWe/hour.
2	N/A	N	BOP SRO	Swap VP chillers from A and C to B and C.
3	P3E1A1D	I	RO SRO	CRD FCV Setpoint Failure.
4	VHTM60 AD	CR	BOP SRO	1A TDRFP Lube Oil Leak.
5	MCF030	I	ALL	Heater String Isolation.
6	MGC002	C	BOP SRO	Loss of Stator Cooling.
7	MCF081	M	BOP SRO	1B TDRFP Failure to Trip.
8			ALL	5 Rod ATWS.
9	MEH001 MMS007		BOP SRO	Failure of 1A EHC Pp./EHC line rupture.

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

OPERATING TEST NO.:

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	2	3	4
RO	Reactivity	1	Y	2/	Y	Y/4
	Normal	1	/2	/1	/2	/2
	Instrument / Component	4	4,5/3,6	5,6/3,4	5,6/3,4	3,5/4,5,6
	Major	1	7,8	7-9	7,8	7-9
As RO	Reactivity	1	1	2	1	1
	Normal	0				
	Instrument / Component	2	4,5	5,6	5,6	3,5
	Major	1	7,8	7-9	7,8	7,8,9
SRO-I						
As SRO	Reactivity	0				
	Normal	1	2	1	2	2
	Instrument / Component	2	3-6	3-6	3-6	3-6
	Major	1	7,8	7-9	7-8	7-9
SRO-U	Reactivity	0				
	Normal	1	2	1	2	2
	Instrument / Component	2	3-6	3-6	3-6	3-6
	Major	1	7,8	7-9	7-8	7-9

Instructions:
(1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
(2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.
(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.

Author: Patrick Lahey 1/17/13

NRC Reviewer: Mark R. McNeil FOR MEB

Tier/Group	Exam Outline	Randomly Selected K/A	Reason for Rejection
2 / 1	RO	211000A3.06	Appears to be double jeopardy with 204000K1.08. Replaced with randomly selected KA 215004G2.4.4
2 / 1	SRO	211000A3.06	Appears to be double jeopardy with 204000K1.08. Replaced with randomly selected KA 215004G2.4.4