Area	Exam			Recommendation #1	Recommendation #2	Recommendation #3	Recommendation #4	Avoid
	99 Exam	01 Exam	Rev 9 Req					
ritten Questions	65	50	40	Per Nureg	Per Nureg	Per Nureg	Per Nureg	Per Nurec
	7 GFE	8 GFE	50 - 60% Lvl 2	40	"+" 10	"+" 10	"+" 10	40 LGS
	24 LGS	14 LGS	30 bank		50	50	50	40 PBAP
	5 Common	8 Common	4 new					
	22 PBAPS	14 PBAPS	6 modified		48 KM 90 M A A A A A A A A A A A A A A A A A A			
	7 Admin	6 Admin	10 Admin (including GFE)		《生活性》(1)。《生物》(1)	MA		
Admin JPM	20 Questions	4 JPM / 2 Question	3 JPMs	3 Common PB/LGS JPMs	3 Common PB/LGS JPMs	3 LGS JPMs +	3 Common PB/LGS JPMs	3 LGS JPN
						1 PBAPS (Differences))	3 PB JPM
	10 PBAPS Question	1 LGS JPM	<= 1 from Previous 2 Exams		A Company of the Company of the Company	Dec -	P	
	10 LGS Question	2 Common JPM	>= 1 New JPM			3-Common PB/LGS JPMs		
		2 PBAPS Question						
		1 PBAPS JPM						
System JPM	10 JPM	10 JPM	4 JPMs	2 LGS	2 LGS	4 LGS	4 LGS	4 LGS
	5 PBAPS JPMs	5 PBAPS JPMs	2 FHE	2 PBAPS	2 PBAPS	2 PBAPS (Differences)	4 PBAPS	4 PBAPS
	5 LGS JPMs	5 LGS JPMs	2 Non FHE		THE PROPERTY OF	4		
			2 Alternate Path		Professional Company	1	e to any of the security had	
			<= 1 from Previous 2 Exams					
St. Sec.			>= 1 New JPM					
Scenarios			3 Emergency/Abnormal Plan JPM	1 LGS	3 LGS	3 LGS	3 LGS	3 LGS
	2 PBAPS Scenarios	2 PBAPS Scenarios	1 Refuel Accident	1 PBAPS	3 PBAPS	1 PBAPS (Differences)	3 PBAPS	3 PBAPS
	2 LGS Scenarios	2 LGS Scenarios	1 Alternate Path	1Common				
			<= 1 from Previous 2 Exams		1 (A. 1. (A.		The second secon	
			>= 1 New JPM					
			2 Tech Spec					
			<= 7 from Bank		ALCOHOL: NEW YORK AND			

4 New Questions

3 Admin JPMs (1 New) 4 System JPMs (1 New) 3 E/A JPMs (1 New)

Cannot Duplicate Audit Tasks

5 New Questions 3 Admin JPMs (1 New) 4 System JPMs (1 New) 6 E/A JPMs (2 New)

5 New Questions 4 Admin JPMs (1 New) 6 System JPMs (3 New) 4 E/A JPMs (2 New) 8 System JPMs (2 New) 6 E/A JPMs (2 New)

5 New Questions

8 New Questions 6 Admin JPMs (2 New) 8 System JPMs (2 New) 6 E/A JPMs (2 New)

Area	Exam			Recommendation #1	Recommendation #2	Recommendation #3	Recommendation #4	Avoid
1:11 O 11	99 Exam	01 Exam	Rev 9 Req					
Vritten Questions	65	50	40	Per Nureg	Per Nureg	Per Nureg	Per Nureg	Per Nureg
	7 GFE	8 GFE	50 - 60% Lvl 2	40	"+" 10	"+" 10	"+" 10	40 LGS
	24 LGS	14 LGS	30 bank		50	50	50	40 PBAPS
	5 Common	8 Common	4 new					
	22 PBAPS	14 PBAPS	6 modified					
Advis IDM	7 Admin	6 Admin	10 Admin (including GFE)	Table State of the			to the second second second	
Admin JPM	20 Questions	4 JPM / 2 Question	3 JPMs	3 Common PB/LGS JPMs	3 Common PB/LGS JPMs	3 LGS JPMs + 1 PBAPS (Differences)	3 Common PB/LGS JPMs	3 LGS JPMs 3 PB JPMs
	10 PBAPS Question	1 LGS JPM	<= 1 from Previous 2 Exams			or		
	10 LGS Question	2 Common JPM	>= 1 New JPM			3 Common PB/LGS JPMs		
		2 PBAPS Question			A STATE OF THE STATE OF		THE PROPERTY OF THE PARTY.	
and the second		1 PBAPS JPM						
System JPM	10 JPM	10 JPM	4 JPMs	2 LGS	2 LGS	4 LGS	4 LGS	4 LGS
	5 PBAPS JPMs	5 PBAPS JPMs	2 FHE	2 PBAPS	2 PBAPS	2 PBAPS (Differences)	4 PBAPS	4 PBAPS
	5 LGS JPMs	5 LGS JPMs	2 Non FHE					
			2 Alternate Path					
			<= 1 from Previous 2 Exams					
			>= 1 New JPM					
Scenarios			3 Emergency/Abnormal Plan JPM	1 LGS	3 LGS	3 LGS	3 LGS	3 LGS
	2 PBAPS Scenarios	2 PBAPS Scenarios	1 Refuel Accident	1 PBAPS	3 PBAPS	1 PBAPS (Differences)	3 PBAPS	3 PBAPS
	2 LGS Scenarios	2 LGS Scenarios	1 Alternate Path	1Common				The second section is
			<= 1 from Previous 2 Exams					
			>= 1 New JPM					
			2 Tech Spec					
			<= 7 from Bank					
				4 New Questions	5 New Questions	5 New Questions	5 New Questions	8 New Questions
				3 Admin JPMs (1 New)	3 Admin JPMs (1 New)	4 Admin JPMs (1 New)	3 Admin JPMs (1 New)	6 Admin JPMs (2 N
				4 System JPMs (1 New)	4 System JPMs (1 New)	6 System JPMs (3 New)	8 System JPMs (2 New)	8 System JPMs (2 N
				3 E/A JPMs (1 New)	6 E/A JPMs (2 New)	4 E/A JPMs (2 New)	6 E/A JPMs (2 New)	6 E/A JPMs (2 Ne

Cannot Duplicate Audit Tasks

System JPM 10 JPM 10 JPM 2 PBAPS JPMs 5 PBAPS JPMs 5 PBAPS JPMs 5 LGS JPMS JPMS 5 LGS JPMS JPMS JPMS JPMS JPMS JPMS JPM	n #4 Avoid
7 GFE 24 LGS 14 LGS 30 bank 50 Common 8 Common 4 new 6 modified 7 Admin JPM 20 Question 10 LGS Question 1 LGS JPM 2 PBAPS Question 1 DGS JPM 2 PBAPS QUestion 1 DGS QUESTION 1 DGS JPM 2 PBAPS QUESTION 1 DGS JPM 3 LGS JPM 3 Common PB/LGS JPM 3 COMMON 3	
24 LGS	Per Nureg
System JPM	40 LGS
22 PBAPS 14 PBAPS 6 modified 7 Admin 6 Admin 10 Admin (including GFE) Admin JPM 20 Questions 4 JPM / 2 Question 3 JPMs 3 Common PB/LGS JPMs 3 LGS JPMs + 1 PBAPS (Differences) or 3 Common PB/LGS JPMs 10 PBAPS Question 10 LGS Question 2 PBAPS Question 2 PBAPS Question 1 PBAPS JPM 2 PBAPS Question 2 PBAPS Question 1 PBAPS JPM > 1 New JPM 2 PBAPS Question 2 PBAPS JPMs 2 LGS 2 LGS 4 PBAPS System JPM 10 JPM 4 JPMs 2 FHE 2 PBAPS 2 PBAPS 2 PBAPS (Differences) 4 PBAPS 5 LGS JPMs 5 LGS JPMs 2 YON FHE 2 PBAPS 2 PBAPS 2 PBAPS (Differences) 4 PBAPS	40 PBAPS
Admin JPM 20 Questions	
Admin JPM 20 Questions 4 JPM / 2 Question 3 JPMs 3 Common PB/LGS JPMs 3 Common PB/LGS JPMs 3 LGS JPMs + 1 PBAPS (Differences) or 10 LGS Question 1 LGS JPM 2 Common JPM 2 PBAPS Question 1 PBAPS JPM 2 PBAPS JPM 4 JPMs 2 LGS 2 PBAPS JPMs 5 PBAPS JPMs 5 PBAPS JPMs 2 FHE 2 PBAPS 2 PBAPS (Differences) 4 PBAPS (Differences) 5 LGS JPMs 5 LGS JPMs 5 LGS JPMs 2 Non FHE	
10 PBAPS Question	2101
10 PBAPS Question	
10 LGS Question	3 PB JPMs
2 PBAPS Question 1 PBAPS JPM 2 LGS 2 LGS 4 PBAPS 5 PBAPS JPMs 5 PBAPS JPMs 2 FHE 2 PBAPS 2 PBAPS 2 PBAPS (Differences) 4 PBAPS 5 LGS JPMs 5 LGS JPMs 2 Non FHE 2 PBAPS	
1 PBAPS JPM	
System JPM 10 JPM 10 JPM 4 JPMs 2 LGS 2 LGS 4 LGS 4 LGS 4 PBAPS 5 PBAPS JPMs 5 PBAPS JPMs 5 LGS JPMs 5 LGS JPMs 2 Non FHE 2 PBAPS 5 LGS JPMs 5 LGS JPMs 2 Non FHE	
5 PBAPS JPMs 5 PBAPS JPMs 2 FHE 2 PBAPS 2 PBAPS 2 PBAPS (Differences) 4 PBAPS 5 LGS JPMs 5 LGS JPMs 2 Non FHE	4 LGS
5 LGS JPMs 5 LGS JPMs 2 Non FHE	4 PBAPS
	41040
<= 1 from Previous 2 Exams	
>= 1 New JPM	
Scenarios 3 Emergency/Abnormal Plan JPM 1 LGS 3 LGS 3 LGS 3 LGS	3 LGS
2 PBAPS Scenarios 2 PBAPS Scenarios 1 Refuel Accident 1 PBAPS 3 PBAPS 1 PBAPS (Differences) 3 PBAPS	3 PBAPS
2 LGS Scenarios 2 LGS Scenarios 1 Alternate Path 1 Common	
<= 1 from Previous 2 Exams	
>= 1 New JPM	
2 Tech Spec	
<= 7 from Bank	
4 New Questions 5 New Questions 5 New Questions 5 New Questions 5 New Questions	
3 Admin JPMs (1 New) 3 Admin JPMs (1 New) 4 Admin JPMs (1 New) 3 Admin JPMs (1 New) 4 Admin JPMs (1 New) 3 Admin JPMs (1 New) 4 Admin JPMs (1 New) 3 Admin JPMs (1 New) 3 Admin JPMs (1 New) 4 Admin JPMs (1 New) 3 Admin JPMs (1 New) 4 Admin JPMs (1 New) 3 Admin JPMs (1 New) 4 Admin JPMs (1 New) 4 Admin JPMs (1 New) 5 Admin JPMs (1 New) 5 Admin JPMs (1 New) 5 Admin JPMs (1 New) 6 Admin JPMs (1 New) 6 Admin JPMs (1 New) 7 Admin JPMs (1 New) 8 Admin JPMs (1 New) 8 Admin JPMs (1 New) 9 Admin J	
4 System JPMs (1 New) 4 System JPMs (1 New) 6 System JPMs (3 New) 8 System JPMs (2	
3 E/A JPMs (1 New) 6 E/A JPMs (2 New) 4 E/A JPMs (2 New) 6 E/A JPMs (2 New) 6 E/A JPMs (2 New)	

Cannot Duplicate Audit Tasks

www.exeloncorp.com



Limerick Generating Station Limerick Learning Center 3146 Sanatoga Road Pottstown, PA 19464

NUREG-1021

April 1, 2005

Mr. S. Collins, Administrator U.S. NRC Region I 475 Allendale Road King of Prussia, PA 19406

Limerick Generating Station, Units 1 and 2
Peach Bottom Atomic Power Station, Units 2 and 3
Facility Operating License Nos. NPF-39 and NPF-85
Facility Operating License Nos. DPR-44 and DPR-56
NRC Docket Nos. 50-352 and 50-353
NRC Docket Nos. 50-277 and 50-278

Subject: Submittal of LSRO Licensed Operator Examination Outline

In accordance with NUREG-1021, Revision 9, "Operator Licensing Examination Standards for Power Reactors", Exelon is submitting the LSRO Licensed Operator examination outline for Limerick Generating and Peach Bottom Atomic Power Stations. This submittal supports the initial (LSRO) license examination scheduled to commence the week of June 13, 2005.

In accordance with NUREG-1021, Revision 9, Section ES-201, please ensure that these materials are withheld from public disclosure until after the examinations are complete.

Should you have any questions concerning this letter or the examination outlines, please contact Corey Goff at (610) 718-4084.

Sincerely,

Carl E. Rich

Facility Representative/Operations Training Manager-LGS

cc: J. Caruso, Chief Examiner NRC Region I w/Enclosures
S. Hansell USNRC Senior Resident Inspector, LGS w/o Enclosures
NRC Document Control Desk w/o Enclosures

Enclosures:

ES-701-1, LSRO BWR Written Exam outline ES-701-3, LSRO Generic Knowledge and Abilities Outline (Tier 3) ES-701-4, LSRO Operating Test Outline ES-701-5, LSRO Examination Outline Quality Checklist

Tion /	Dondonski	T
Tier / Group	Randomly Selected K/A	Reason for Rejection
Tier 1	295019 AK2.14	LGS and Common and PBAPS Outline - Partial or Total Loss of Instrument Air / Plant Air Systems. After reviewing the task list, lesson plan materials taught to the LSROs and discussion with LSRO incumbents, this K/A was rejected. This topic falls outside the scope of LSRO activities and required job knowledge. This K/A was replaced with randomly selected K/A 295034 EK2.01 which has been verified to be contained within the LSRO job scope
Tier 2	223001 G2.1.12	LGS and Common Outline – Loss of Primary Containment. After reviewing the task list, lesson plan materials taught to the LSROs and discussion with LSRO incumbents, this K/A was rejected. This topic falls outside the scope of LSRO activities and required job knowledge. This K/A was replaced with selected K/A 290001 G2.1.12 which has been verified to be pertinent to the LSRO job scope
Tier 2	215005 K2.01	LGS and Common ans PBAPS Outline - APRM / LPRM Power Supply to LPRM Channels. This K/A is beyond the scope of the LSRO (basis for rejection is the same method as described above). K/A was replaced by randomly selected K/A 2040000 A3.04 which is more applicable to LSRO
Tier 3	292003 K1.09	LGS and Common Outline – Randomly selected K/A to Define doubling time and calculate it it using the power equation is beyond the scope of the LSRO (basis for rejection is the same method as described above). This K/A was replaced with randomly selected K/A 292004 K1.14 which is applicable to LSRO's
Tier 2	233000 K6.10	PBAPS Outline - Fuel Pool Cooling / Cleanup / Reactor Cavity Seal Failure. Physical design of the PBAPS refuel seals prevents failure without considering implausible failure mechanisms. Although this K/A can be adequately tested at LGS, it cannot be adequately tested a PBAPS. This K/A was rejected and was replaced with randomly selected K/A 215003 K5.03 which has been verified to be contained within the LSRO job scope
	:	

Changes to the sample plant submitted April 1st

Revision 1 of the sample plan includes the following changes

K/A Rejections per ES-401-4

PBAPS System JPM Change

- Temporarily defeat RHR SDC automatic reactor pressure high isolation GP-29, was deleted based on the following criteria
 - Not contained on LSRO Task List
 - o Actual task performed by a facility Equipment Operator
 - o Outside the job scope of LSRO
 - o LSRO incumbent recommendation
- Was replaced with Refueling Interlock Functional Test with the Inability to move control rods – Testing Rod Withdraw Interlocks
- Changed title and JPM from Fully Automatic to Semi-Automatic
 - Semi-Automatic Mode is more representative of the task that LSRO perform/direct

Facility:		LG	S				Date	of Ex	am: J	UNE	13 20	05
Tier					K/A	Categ	ory Po	oints				
nei	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	Total
1. Emergency & Abnormal Plant Evolutions	2	2	2				1	2			1	10
2. Plant Systems	2	2	2	2	2	2	2	2	1	2	1	20
Generic Knowledge a			1	2	2	3			4	G	FE	10
Abilities Catego	ories	:	2	2	2	2			2		2	

Note: 1. Ensure that at least one topic from every K/A category is sampled within each tier.

- 2. The point total for each tier in the proposed outline must match that specified in the table. The final point total for each tier may deviate by ± 1 from that specified in the table based on NRC revisions. The final exam must total 40 points.
- 3. Select topics from many systems and evolutions; avoid selecting more than two K/A topics from a given system (except fuel handling equipment) or evolution (except fuel handling accident).
- 4. The shaded areas are not applicable to the category/tier.
- 5. 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.
- 6. If the applicants have not previously taken the GFE, Tier 3 shall include basic reactor theory, component, and thermodynamic topics that apply to fuel handling operations.
- 7. Systems/evolutions within each tier are identified on the associated outline. Enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IR) for the SRO license level, and the point totals (#) for each system and category. Enter the tier totals for each category in the table above.
- 8. For Tier 3, select topics from Setion 2 of the K/A catalog, and enter the K/A numbers, descriptions, importance ratings, and point totals (#) on Form ES-701-3.
- 9. Refer to ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements. The facility licensee's JTA for fuel handlers should be used as the basis for eliminating or adding testable topics.

ES-701, Page 7 of 18

ES-701	Em						tten Examination Outline ormal Plant Evolutions – Tier 1	Form I	ES-701-1
	K 1	K 2	K 3	A 1	A 2	G	K/A Topics(s)	IR	#
295003 Partial or Complete Loss of AC		х					AK2.02, Emergency generators	4.2	1
295004 Partial of Total Loss of DC									
295014 Inadvertent Reactivity Addition					х		AA2.03, Cause of reactivity addition	4.3	1
295018 Partial or Total Loss of CCW	x						AK1.01, Effects on component/system operation	3.6	1
295021 Loss of Shutdown Cooling	x						AK1.03, Adequate core cooling	3.9	1
295023 Refueling Accidents				х			AA1.03, Fuel handling equipment	3.6	1
295033 High Secondary Containment Area Radiation Levels						x	G2.3.10, Ability to perform procedures to reduce excessive lev of rad and guard against personnel exp	3.3	1
295034 Secondary Containment Ventilation High Radiation									
295006 SCRAM	ļ		L					ļ	
295008 High Reactor Water Level					x		AA2.01, Reactor water level	3.9	1
295009 / 295031 Reactor Low Water Level			x				EK3.02, Core coverage	4.7	a 1
295017 / 295038 High Offsite Release Rate			x				AK3.01, System isolations Juend when	13.9	1
295019 Partial or Total Loss of Inst. Air		х					AK2.14, Plant air systems = NOT appleulle	3.2	1
295020 Inadvertent Cont. Isolation							at Linerick	11	
295030 Low Suppression Pool Wtr Lvl							Will Be repla	w	
295035 Secondary Containment High Differential Pressure							by leune		
600000 Plant Fire On Site			_		_				
	-								
						_			
	-							-	
K/A Category Totals:	2	2	2	1	2	1	Tier Point Total:		10

215004 Source Range Monitor X	ES-701						LSF						ation Outline Tier 2	Form E	ES-701-1
215004 Source Range Monitor X			K 2	K 3	K K K A A A A G K/A Topics(s)		K/A Topics(s)	IR	#						
233000 Fuel Pool Cooling/Cleanup	205000 Shutdown Cooling							х					A1.08, Heat exchanger temperatures	2.9	1
X K6.10, Reactor cavity seal failure 3.3 1	215004 Source Range Monitor		x										K2.01, SRM channels/detectors	2.8	1
Equipment							х						K6.10, Reactor cavity seal failure	3.3	1
253000 DC Electrical Dist.				x									K3.03, Fuel handling problems	3.8	1
290002 Reactor Vessel Internals	262001 AC Electrical Dist.	ļ													
Internals	263000 DC Electrical Dist.			L											
201003 Control Rod and Drive					x								K4.05, Natural circulation	3.5	1
Mechanism	201002 RMCS										х		A4.03, Rod drift test switch	2.8	1
Injection Mode							х						K6.01, Control rod drive hydraulic system	3.3	1
211000 SLC		ļ				x							K5.02, Core cooling methods	3.7	1
212000 RPS	204000 RWCU	<u> </u>													
214000 RPIS X	211000 SLC	_			Х								K4.07, RWCU isolation	3.9	1
215001 Traversing In-Core Probe 215003 IRM 215005 APRM / LPRM X X X X X X X X X X X X X	212000 RPS									х			A3.04, System status lights and alarms	3.8	1
Probe 215003 IRM X K5.03, Changing detector position 3.1 1 215005 APRM / LPRM X K2.01, LPRM channels LUM LYLOUR 1 223001 Primary CTMT and Aux. X G2.1.12, Ability to apply TS for a system 4.0 1 223002 PCIS/Nuclear Steam Supply Shutoff X K3.16, Shutdown cooling system/RHR 3.3 1 261000 SGTS X A4.02, Suction valves 3.1 1 264000 EDGs X K1.01, AC electrical systems 4.1 1 272000 Radiation Monitoring X A1.01, Lights, alarms, and indications associated with normal operations 3.2 1 286000 Fire Protection X A2.03, High area radiation 3.6 1 290001 Secondary CTMT X A2.03, High area radiation 3.6 1 400000 Component Cooling A2.03, High area radiation 3.6 1	214000 RPIS	Х											K1.05, Full core display	3.3	1
215005 APRM / LPRM															
223001 Primary CTMT and Aux. X G2.1.12, Ability to apply TS for a system 4.0 1 223002 PCIS/Nuclear Steam Supply Shutoff X K3.16, Shutdown cooling system/RHR 3.3 1 261000 SGTS X A4.02, Suction valves 3.1 1 264000 EDGs X K1.01, AC electrical systems 4.1 1 272000 Radiation Monitoring X A1.01, Lights, alarms, and indications associated with normal operations 3.2 1 286000 Fire Protection X A2.03, High area radiation 3.6 1 300000 Instrument Air 400000 Component Cooling X A2.03, High area radiation 3.6 1	215003 IRM					х							K5.03, Changing detector position		<u>/ 1 </u>
and Aux. X G2.1.12, Ability to apply TS for a system 4.0 1 223002 PCIS/Nuclear Steam Supply Shutoff X K3.16, Shutdown cooling system/RHR 3.3 1 261000 SGTS X A4.02, Suction valves 3.1 1 264000 EDGs X K1.01, AC electrical systems 4.1 1 272000 Radiation Monitoring X A1.01, Lights, alarms, and indications associated with normal operations 3.2 1 286000 Fire Protection X A2.03, High area radiation 3.6 1 300000 Instrument Air 400000 Component Cooling X A2.03, High area radiation 3.6 1	215005 APRM / LPRM		х										K2.01, LPRM channels Julist we	2.0	
Supply Shutoff X K3.16, Shutdown cooling system/RHR 3.3 1 261000 SGTS X A4.02, Suction valves 3.1 1 264000 EDGs X K1.01, AC electrical systems 4.1 1 272000 Radiation Monitoring X A1.01, Lights, alarms, and indications associated with normal operations 3.2 1 286000 Fire Protection X A2.03, High area radiation 3.6 1 300000 Instrument Air A2.03, High area radiation 3.6 1 400000 Component Cooling A2.03, High area radiation 3.6 1												x	· · · · · · · · · · · · · · · · · · ·	1 1	_
264000 EDGs X K1.01, AC electrical systems 4.1 1 272000 Radiation Monitoring X A1.01, Lights, alarms, and indications associated with normal operations 3.2 1 286000 Fire Protection 288000 Plant Ventilation X A2.03, High area radiation 3.6 1 290001 Secondary CTMT X A2.03, High area radiation 3.6 1 400000 Component Cooling 400000 Component Cooling 4.1 1	223002 PCIS/Nuclear Steam Supply Shutoff			х									K3.16, Shutdown cooling system/RHR	3.3	1
272000 Radiation Monitoring X A1.01, Lights, alarms, and indications associated with normal operations 3.2 1 286000 Fire Protection 288000 Plant Ventilation X A2.03, High area radiation 3.6 1 300000 Instrument Air 400000 Component Cooling	261000 SGTS						\Box				х		A4.02, Suction valves	3.1	1
272000 Radiation Monitoring X associated with normal operations 3.2 1 286000 Fire Protection 288000 Plant Ventilation X A2.03, High area radiation 3.6 1 300000 Instrument Air 400000 Component Cooling X A2.03, High area radiation 3.6 1	264000 EDGs	х					_						K1.01, AC electrical systems	4.1	1
288000 Plant Ventilation X A2.03, High area radiation 3.6 1 300000 Instrument Air 400000 Component Cooling 0	272000 Radiation Monitoring							X						3.2	1
290001 Secondary CTMT X A2.03, High area radiation 3.6 1 300000 Instrument Air 400000 Component Cooling Image: Component Cooling Cool	286000 Fire Protection														
300000 Instrument Air 400000 Component Cooling	288000 Plant Ventilation														
400000 Component Cooling	290001 Secondary CTMT								х				A2.03, High area radiation	3.6	1
	300000 Instrument Air														
	400000 Component Cooling Water								х				A2.02, High/low surge tank level	3.0	1
K/A Category Totals: 2 2 2 2 2 2 2 1 2 1 Tier Point Total: 20					_	-		_		-	_				

Facility	1.0	Data of Evany III	INI 42 0	OOE
Facility:	<u>LG</u>	SS Date of Exam: JU	JN 132	1
Category	K/A#	Tonia	IR	4
		Topic	3.3	# 1
	2.1.22	Ability to determine mode of operation		
1.	2.1.32	Ability to explain and apply system limits and precautions	3.8	1
Conduct of	2.1	precautions		ļ
Operations	2.1			<u> </u>
				<u> </u>
· · · · · · · · · · · · · · · · · · ·	Subtota	2 7	2	
	2.2.26	Knowledge of refueling administrative requirements	3.7	1
2.	2.2.29	Knowledge of SRO fuel handling	3.8	1
Equipment		responsibilities		
Control	2.2			
	2.2			
	Subtota			2
	2.3.1	Knowledge of 10CFR20 and related facility radiation control requirements	3.0	1
•	2.3.4	Knowledge of radiation exposure limits and	3.1	1
3.		contamination control, including permissible		
Radiation		levels in excess of those authorized		
Control	2.3			i
	2.3			
	Subtota		1	2
	2.4.29	Knowledge of the emergency plan	4.0	1
4.	2.4.45	Ability to prioritize and interpret the significance	3.6	1
Emergency		of each annunciator or alarm	0.0	'
Procedures /	2.4			
Plan	2.4			<u> </u>
	Subtotal			2
	K1.08	291006, Relationship between flow rates and	3.0	1
		temperature		
5.	K1.09	292003, Define doubling time and calculate it	2.6	1
Generic		using the power equation		
Fundamentals				
				,
	Subtota		1	2
			İ	
Tier 3 Point Tota	al			10

Applicant Docket Number: 50-352/353			Page 2 of
Facility: LGS	Date of E	xamination: Jl	JN 13 2005
Title / Description of Tasks (JPMs)	Type Codes*	Evaluation (S or U)	Comment Page Number
Administrative			
Complete FHD turn over checklist	NT		
2. Calculate Stay Time	М		
3. CCTAS revision (2014)	D		
Systems			
FHE – movement of dummy bundle in SFP Alt Path due to debris obstruction (NRC2001)	DPAI		
FHE – Fuel movement from the FP to fuel prep machine. Alt Path due to grapple engage light goes out (2045)	DAI		
3. Install rod position test box (2029)	DI		
4. Respond to fuel floor *0C222 alarm	NI		
Emergency/Abnormal Plant Evolutions			_
Response to an unexpected rise in SRM count rate during fuel handling in the reactor core (NRC1999)	MPI		
Transfer of fuel in the spent FP, response to a dropped fuel assembly	NIRA		
3. EAL classification, spent FP level	NTIR		
Type Codes & Criteria: (A)Iternative pat (C)ontrol room (D)irect from ba (I)n-plant (N)ew or (M)odi (P)revious two e (R)efueling acci (T)echnical spec	nk (≤ 7) fied form ba exams (≤ 1 dent (1)	ank including 1 / section)	I(A) (≥ 1 / section)

Facility:		PB	APS				Da	te of I	Exam:	JUN	E 13 2	2005	
Tier		K/A Category Points											
rici	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	Total	
Emergency Abnormal Plant Evolutions	2	1	1				1	0			0	5	
2. Plant Systems	1	1	1	0	0	1	1	0	0	0	0	5	
3. Generic			1	2	2	3		4	4	G	FE	0	
	Knowledge and Abilities Categories		0			0		0		(0	J	

Note: 1. Ensure that at least one topic from every K/A category is sampled within each tier.

- 2. The point total for each tier in the proposed outline must match that specified in the table. The final point total for each tier may deviate by ± 1 from that specified in the table based on NRC revisions. The final exam must total 40 points.
- Select topics from many systems and evolutions; avoid selecting more than two K/A
 topics from a given system (except fuel handling equipment) or evolution (except fuel
 handling accident).
- 4. The shaded areas are not applicable to the category/tier.
- 5. * 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.
- 6. If the applicants have not previously taken the GFE, Tier 3 shall include basic reactor theory, component, and thermodynamic topics that apply to fuel handling operations.
- 7. Systems/evolutions within each tier are identified on the associated outline. Enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IR) for the SRO license level, and the point totals (#) for each system and category. Enter the tier totals for each category in the table above.
- 8. For Tier 3, select topics from Setion 2 of the K/A catalog, and enter the K/A numbers, descriptions, importance ratings, and point totals (#) on Form ES-701-3.
- Refer to ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements. The facility licensee's JTA for fuel handlers should be used as the basis for eliminating or adding testable topics.

ES-701, Page 7 of 18

ES-701	Em						ten Examination Outline rmal Plant Evolutions – Tier 1	Form E	S-701-
	K 1	K 2	K 3	A 1	A 2	G	K/A Topics(s)	IR	#
295003 Partial or Complete Loss of AC									
295004 Partial of Total Loss of DC									
295014 Inadvertent Reactivity Addition									
295018 Partial or Total Loss of CCW	x						AK1.01, Effects on component/system operation	3.6	1
295021 Loss of Shutdown Cooling	х						AK1.03, Adequate core cooling	3.9	1
295023 Refueling Accidents				х			AA1.03, Fuel handling equipment	3.6	1
295033 High Secondary Containment Area Radiation Levels									
295034 Secondary Containment Ventilation High Radiation									
295006 SCRAM									
295008 High Reactor Water Level									
295009 / 295031 Reactor Low Water Level			x				EK3.02, Core coverage	4.7	11
295017 / 295038 High Offsite Release Rate									
295019 Partial or Total Loss of Inst. Air		х					AK2.14, Plant air systems NA MB	3.2	1
295020 Inadvertent Cont. Isolation							War Ifw Lece	ncen	
295030 Low Suppression Pool Wtr Lvl	<u> </u>						will be right	uld	
295035 Secondary Containment High Differential Pressure									
600000 Plant Fire On Site									
	-	_				ļ			
· · · · · · · · · · · · · · · · · · ·	_								
K/A Category Totals:	2	1	1	1	0	0	Tier Point Total:		5

ES-701						LSF						ntion Outline - Tier 2	Form E	S-701-1
	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topics(s)	IR	#
205000 Shutdown Cooling							X					A1.08, Heat exchanger temperatures	2.9	1
215004 Source Range Monitor				L_										
233000 Fuel Pool Cooling/Cleanup						x						K6.10, Reactor cavity seal failure	3.3	1
234000 Fuel Handling Equipment			x									K3.03, Fuel handling problems	3.8	1
262001 AC Electrical Dist.		Ш			L									
263000 DC Electrical Dist.	ļ.,									L				
290002 Reactor Vessel Internals														
201002 RMCS	_			_						_				
201003 Control Rod and Drive Mechanism														
203000 RHR/LPCI: Injection Mode														
204000 RWCU			L											
211000 SLC						L			_					
212000 RPS							L		L					
214000 RPIS	x		L									K1.05, Full core display	3.3	11
215001 Traversing In-Core Probe														
215003 IRM														
215005 APRM / LPRM		х										K2.01, LPRM channels Will//30	2.6	1
223001 Primary CTMT and Aux.												K2.01, LPRM channels Will/Bell replaced por ESAO Yash	2	
223002 PCIS/Nuclear Steam Supply Shutoff												100/ 120.		
261000 SGTS	_		L				L	_			_			
264000 EDGs					<u> </u>	ļ								
272000 Radiation Monitoring	$oxed{oxed}$			_		<u> </u>	<u> </u>				<u>L</u>			
286000 Fire Protection									_		<u> </u>			
288000 Plant Ventilation	<u> </u>						<u> </u>				_			
290001 Secondary CTMT														
300000 Instrument Air														
400000 Component Cooling Water														
K/A Category Totals:	1	1	1	0	0	1	1	0	0	0	0	Tier Point Total:		

Facility:	PBAPS	Date of Exam: JUN 13 2005			
Category	1//0.44	Tonio	IR	#	
	2.1	Topic	IK	#	
4	2.1				
1. Conduct of	2.1				
Operations	2.1				
	Subtotal			0	
	2.2	····		├	
2.	2.2				
Equipment	2.2			<u> </u>	
Control	2.2				
	Subtotal			0	
	2.3			<u> </u>	
3.	2.3				
Radiation	2.3			 	
Control	2.3			<u> </u>	
	Subtotal			0	
4. Emergency Procedures / Plan	2.4			╁╌	
	2.4				
	2.4	-		f	
	2.4			 	
	Subtotal			0	
	Cabtotal			 	
5.				<u> </u>	
Generic					
Fundamentals				†	
	Subtotal			\vdash	

Applicant Docket Number: 50-277/278 Facility: PBAPS	Date of E	xamination: JU	Page 2 of JN 13 2005
Title / Description of Tasks (JPMs)	Type Codes*	Evaluation (S or U)	Comment Page Number
Administrative			
1.			
2.			
3.			
Systems	_		
FHE – Automatic dummy bundle transfer in the spent FP (NRC 2001)	DPI		
2. FHE – Fuel movement in the spent FP, hoist loaded light extinguished (3019)	DAI		
3. Temporarily defeat RHR SDC automatic reactor pressure – high isolation GP-29	NI		
4. Remove Unit * RF floor ARM from service	NI		
Emergency/Abnormal Plant Evolutions			
EAL classification, loss of spent FP water level	NTIR		
2.			
3.			
Type Codes & Criteria: (A)Iternative part (C)ontrol room (D)irect from ba (I)n-plant (N)ew or (M)odi (P)revious two ed (R)efueling acci (T)echnical speci	nk (≤ 7) fied form ba exams (≤ 1 dent (1)	ank including / section)	1(A) (≥ 1 / section)