

2/19/08

SUSQUEHANNA WRITTEN RETAKE EXAM

OUTLINE COMMENTS

Tier 1, Grp 1& 2

Q #58 & 63 - ensure these Qs test different topics

Tier 2 Grp 1

Q # 3 & 4 - direct power supply type Qs okay in limited numbers. However, a better method is to try to ensure questions don't just ask power supplies to components directly but attempt to ask question in a manner that tests operator understanding.

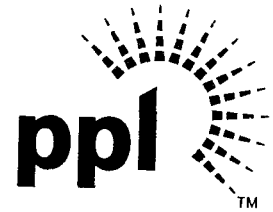
Q #12 - Keep fill system is unique has passive head tank for back-up.

Tier 2 Grp 2

Q # 28 - direct power supply type Qs okay in limited numbers. However, a better method is to try to ensure questions don't just ask power supplies to components directly but attempt to ask question in a manner that tests operator understanding.

Q #30 - may be too basic.

Susquehanna Learning Center
769 Salem Boulevard
Berwick, PA 18603-0467
570-542-3353



February 15, 2008

Mr. John Caruso
USNRC Chief Examiner
USNRC Region 1
475 Allendale Road
King of Prussia, PA 19406-1415

Susquehanna Learning Center
Examination Outlines
PLA 006334 File A14-13D

Dear Mr. Caruso:

Enclosed for your review and approval are the outlines for the PPL Susquehanna, LLC Initial Licensed Operator Examination scheduled on May 16, 2008. This is the written retest examination for the three (3) RO candidates who failed only the NRC Written Examination portion of the exam on December 7, 2007. These outlines are submitted in accordance with NUREG 1021, Operator Licensing Examination Standards for Power Reactors (Revision 9 Supplement 1). The following materials are enclosed:

- Form ES-201-2, Examination Outline Quality Checklist - Rev. 0 (Signed)
- Form ES-201-3, Examination Security Agreement (Copy)
- Form ES-401-1, BWR Examination Outline – Rev. 0
- Form ES-401-3, Generic Knowledge and Abilities Outline Tier 3 – Rev. 0
- Form ES-401-4, Record of Rejected K/A's – Rev. 0

The written examination outline was developed using the electronic random outline generator developed by Western Technical Services, Inc. The software, using the facility suppressed K/A profile, provided a written examination outline in accordance with the criteria contained in NUREG 1021, Revision 9 Supplement 1. Rejected K/As were documented on Form ES-401-4, Record of Rejected K/As.

Since this is a NRC RO Written retest only, this letter and attachments constitutes the 75 Day Submittal. Per our telephone discussion, the RO retest exam with supporting documents will be submitted for your review no later than April 18, 2008.

Also to confirm our prior discussion, a freeze of the Emergency Operating Procedures (EOPs) flowcharts and bases was completed as of February 11, 2008 to support both the candidate remediation and retest exam. This will prevent conflict with the station initiative currently underway to revise the EOPs. Following the NRC written retest examination, candidates will be trained on the updated EOPs along with the incumbent SSES licensees.

Expected additions to the Exam Security Agreement are additional Operation's Department Validation Team Members.

We request these materials be withheld from public disclosure until after the completion of the exam. The enclosed materials have been reviewed for "Safeguards Material" content. None of these materials are deemed to be "Safeguards Material."

Resubmittals of the NRC Form 398 applications with waivers are forthcoming in accordance with ES-202 Preparing and Reviewing Operator Licensing Applications. It is expected that conditions of the NRC Form 396 Medical applications previously submitted will be maintained. However, we also understand that a waiver will be required if more than 6 months have passed since the date of the applicant's last medical examination, including a certification that on the NRC Form 398 that the applicant has not developed any physical or mental conditions (10CFR 55.25) during this time. We will communicate any changes to the applicant's medical condition, as appropriate.

If you have any questions, please feel free to contact me at 570-542-3126, or Sid Morgan or Chris Michaels at 570-542-1891.

Sincerely,



R. M. Peal
Manager - Nuclear Training

Response: No

Enclosures: Listed (Page 1)

cc: R. M. Fry
R. R. Sgarro
Ops Letter File
Nuc Records

- exam outlines - pla

CGM/RMP/nlk

Facility:		SSES 2008 RO Written		Date of Exam:		5/16/2008											
Tier	Group	RO K/A Category Points											SRO-Only Points				
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total	
1. Emergency & Plant Evolutions	1	3	3	3				4	4			3	20	NA	NA	7	
	2	1	2	1				1	1			1	7	NA	NA	3	
	Tier Totals	4	5	4				5	5			4	27	NA	NA	10	
2. Plant Systems	1	3	2	3	3	3	2	2	2	3	1	2	26	NA	NA	5	
	2	2	1	0	1	0	1	1	3	1	1	1	12	NA	NA	3	
	Tier Totals	5	3	3	4	3	3	3	5	4	2	3	38	NA	NA	8	
3. Generic Knowledge & Abilities Categories				1		2		3		4		10	1	2	3	4	7
				4		2		2		2			NA	NA	NA	NA	

- 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 section D.1.b of ES-401, for guidance regarding 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 KAs 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. Refer to Section D.1.b of ES-401 for the applicable K/A's
 8. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IR) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above. If fuel handling equipment is sampled in other than Category A2 or G* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note #1 does not apply). Use duplicate pages for RO and SRO-only exams.
 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 10CFR55.43

SSES 2008 RO Written Exam
Written Examination Outline
Emergency and Abnormal Plant Evolutions – Tier 1 Group 1

EAPE # / Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
295024 High Drywell Pressure / 5	X						EK1.01 - Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL PRESSURE : Drywell integrity: Plant-Specific	4.1	39
295021 Loss of Shutdown Cooling / 4	X						AK1.04 - Knowledge of the operational implications of the following concepts as they apply to LOSS OF SHUTDOWN COOLING : Natural circulation	3.6	40
295004 Partial or Total Loss of DC Pwr / 6	X						AK1.05 - Knowledge of the operational implications of the following concepts as they apply to PARTIAL OR COMPLETE LOSS OF D.C. POWER : Loss of breaker protection	3.3	41
295028 High Drywell Temperature / 5		X					EK2.01 - Knowledge of the interrelations between HIGH DRYWELL TEMPERATURE and the following: Drywell spray: Mark-I&II	3.7	42
295003 Partial or Complete Loss of AC / 6		X					AK2.02 - Knowledge of the interrelations between PARTIAL OR COMPLETE LOSS OF A.C. POWER and the following: Emergency generators	4.1	43
295031 Reactor Low Water Level / 2		X					EK2.15 - Knowledge of the interrelations between REACTOR LOW WATER LEVEL and the following: A.C. distribution: Plant-Specific	3.2	44
295018 Partial or Total Loss of CCW / 8			X				AK3.05 - Knowledge of the reasons for the following responses as they apply to PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER : Placing standby heat exchanger in service	3.2	45
600000 Plant Fire On-site / 8			X				AK3.04 - Knowledge of the reasons for the following responses as they apply to PLANT FIRE ON SITE: Actions contained in the abnormal procedure for plant fire on site	2.8	46
295005 Main Turbine Generator Trip / 3			X				AK3.03 - Knowledge of the reasons for the following responses as they apply to MAIN TURBINE GENERATOR TRIP: Feedwater temperature decrease	2.8	47
295037 SCRAM Conditions Present and Reactor Power Above APRM Downscale or Unknown / 1				X			EA1.05 - Ability to operate and/or monitor the following as they apply to SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN : CRD hydraulics systems	3.9	48
295019 Partial or Total Loss of Inst. Air / 8				X			AA1.02 - Ability to operate and/or monitor the following as they apply to PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR : Instrument air system valves: Plant-Specific	3.3	49
295026 Suppression Pool High Water Temp. / 5				X			EA1.01 - Ability to operate and/or monitor the following as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE: Suppression pool cooling	4.1	50
295025 High Reactor Pressure / 3					X		EA2.02 - Ability to determine and/or interpret the following as they apply to HIGH REACTOR PRESSURE: Reactor power	4.2	51

SSES 2008 RO Written Exam
Written Examination Outline
Emergency and Abnormal Plant Evolutions – Tier 1 Group 1

EAPE # / Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	q#
295023 Refueling Acc Cooling Mode / 8					X		AA2.02 - Ability to determine and/or interpret the following as they apply to REFUELING ACCIDENTS : Fuel pool level	3.4	52
295030 Low Suppression Pool Water Level / 5					X		EA2.02 - Ability to determine and/or interpret the following as they apply to LOW SUPPRESSION POOL WATER LEVEL : Suppression pool temperature	3.9	53
295028 High Drywell Temperature / 5						X	2.4.6 - Emergency Procedures / Plan: Knowledge of EOP mitigation strategies.	3.7	54
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4						X	2.1.31 - Conduct of Operations: Ability to locate control room switches, controls, and indications, and to determine that they correctly reflect the desired plant lineup.	4.6	55
295016 Control Room Abandonment / 7						X	2.1.23 - Conduct of Operations: Ability to perform specific system and integrated plant procedures during all modes of plant operation.	4.3	56
700000 Generator Voltage and Electric Grid Disturbances				X			AA1.02 - Ability to operate and/or monitor the following as they apply to GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES: Turbine/generator controls.	3.8	57
295006 SCRAM / 1					X		AA2.02 - Ability to determine and/or interpret the following as they apply to SCRAM : Control rod position	4.3	58
K/A Category Totals:	3	3	3	4	4	3	Group Point Total:	20	

SSES 2008 RO Written Exam
Written Examination Outline
Emergency and Abnormal Plant Evolutions – Tier 1 Group 2

EAPE # / Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
295020 Inadvertent Cont. Isolation / 5 & 7	X						AK1.02 - Knowledge of the operational implications of the following concepts as they apply to INADVERTENT CONTAINMENT ISOLATION : Power/reactivity control	3.5	59
295002 Loss of Main Condenser Vac / 3		X					AK2.04 - Knowledge of the interrelations between LOSS OF MAIN CONDENSER VACUUM and the following: Reactor/turbine pressure regulating system	3.2	60
295013 High Suppression Pool Temperature / 5			X				AK3.02 - Knowledge of the reasons for the following responses as they apply to HIGH SUPPRESSION POOL TEMPERATURE : Limiting heat additions	3.6	61
295007 High Reactor Pressure / 3				X			AA1.02 - Ability to operate and/or monitor the following as they apply to HIGH REACTOR PRESSURE : HPCI: Plant-Specific	3.5	62
295015 Incomplete SCRAM / 1					X		AA2.02 - Ability to determine and/or interpret the following as they apply to INCOMPLETE SCRAM : Control rod position	4.1	63
295036 Secondary Containment High Sump/Area Water Level / 5						X	2.4.20 - Emergency Procedures / Plan: Knowledge of operational implications of EOP warnings, cautions, and notes.	3.8	64
295034 Secondary Containment Ventilation High Radiation / 9		X					EK2.06 - Knowledge of the interrelations between SECONDARY CONTAINMENT VENTILATION HIGH RADIATION and the following: PCIS/NSSSS: Plant-Specific	3.9	65
K/A Category Totals:	1	2	1	1	1	1	Group Point Total:		7

**SSES 2008 RO Written Exam
Written Examination Outline
Plant Systems – Tier 2 Group 1**

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Imp.	Q#
212000 RPS	X											3.3	1
259002 Reactor Water Level Control	X											3.2	2
205000 Shutdown Cooling			X									2.5	3
209001 LPCS			X									3.0	4
264000 EDGs				X								3.9	5
400000 Component Cooling Water				X								2.9	6
206000 HPCI					X							3.0	7
300000 Instrument Air					X							3.0	8
215004 Source Range Monitor						X						2.8	9
212000 RPS						X						2.7	10
262001 AC Electrical Distribution							X					3.5	11

SSES 2008 RO Written Exam
 Written Examination Outline
 Plant Systems – Tier 2 Group 1

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Imp.	Q#
203000 RHR/LPCI: Injection Mode							X					3.3	12
262002 UPS (AC/DC)								X				2.5	13
263000 DC Electrical Distribution								X				2.5	14
223002 PCIS/Nuclear Steam Supply Shutoff									X			3.3	15
217000 RCIC									X			3.1	16
218000 ADS										X		3.7	17
239002 SRVs										X		3.6	18
259002 Reactor Water Level Control											X	3.7	19
215005 APRM / LPRM											X	3.7	20

SSES 2008 RO Written Exam
 Written Examination Outline
 Plant Systems – Tier 2 Group 1

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Imp.	Q#
261000 SGTS											X	3.9	21
259002 Reactor Water Level Control											X	4.2	22
203000 RHR/LPCI: Injection Mode					X							3.5	23
264000 EDGs	X											3.2	24
209001 LPCS				X								2.8	25
212000 RPS			X									3.2	26
K/A Category Totals:	3	2	3	3	3	2	2	2	3	1	2	Group Point Total: 26	

SSES 2008 RO Written Exam
 Written Examination Outline
 Plant Systems – Tier 2 Group 2

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Imp.	Q#
272000 Radiation Monitoring						X						2.5	27
233000 Fuel Pool Cooling/Cleanup		X										2.8	28
201006 RWM	X											3.4	29
239001 Main and Reheat Steam				X								3.4	30
259001 Reactor Feedwater								X				3.3	31
216000 Nuclear Boiler Inst.	X											3.9	32
256000 Reactor Condensate							X					3.1	33
259001 Reactor Feedwater								X				3.7	34
271000 Off-gas									X			2.9	35
234000 Fuel Handling Equipment										X		3.7	36

SSES 2008 RO Written Exam
 Written Examination Outline
 Plant Systems – Tier 2 Group 2

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	Imp.	Q#
230000 RHR/LPCI: Torus/Pool Spray Mode											X	4.2	37
241000 Reactor/Turbine Pressure Regulator								X				3.4	38
K/A Category Totals:	2	1	0	1	0	1	1	3	1	1	1	Group Point Total: 12	

Facility:		SSES 2008 RO Written Exam		Date:			
Category	K/A #	Topic	RO		SRO-Only		
			IR	Q#	IR	Q#	
1. Conduct of Operations							
	2.1.9	Ability to direct personnel activities inside the control room.	2.9	66			
	2.1.20	Ability to interpret and execute procedure steps.	4.6	67			
	2.1.41	Knowledge of the refueling process.	2.8	69			
	2.1.34	Knowledge of primary and secondary plant chemistry limits.	2.7	74			
Subtotal				4			
2. Equipment Control							
	2.2.17	Knowledge of the process for managing maintenance activities during power operations, such as risk assessments, work prioritizaion, coordination with the transmission system operator.	2.6	68			
	2.2.7	Knowledge of the process for conducting special or infrequent tests.	2.9	75			
Subtotal				2			
3. Radiation Control							
	2.3.12	Knowledge of Radialogical Safety Principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.	3.2	70			
	2.3.4	Knowledge of radiation exposure limits under normal or emergency conditions.	3.2	71			
Subtotal				2			
4. Emergency Procedures /							

Plan						
	2.4.16	Knowledge of EOP implementation hierarchy and coordination with other support procedures or guidelines such as, operating procedures, AOP's and SAMG's.	3.5	72		
	2.4.42	Knowledge of emergency response facilities.	2.6	73		
	Subtotal		2			
Tier 3 Point Total				10		7

