October 8, 2004

Mr. Bryce L. Shriver
President, PPL Generation, LLC and
Chief Nuclear Officer
PPL Generation, LLC
2 North Ninth Street
Allentown, PA 18101

SUBJECT: SUSQUEHANNA NUCLEAR POWER PLANT, UNITS 1 AND 2, OPERATOR AND SENIOR REACTOR OPERATOR INITIAL EXAMINATION REPORT NO. 05000387/2004302 AND 05000388/2004302

Dear Mr. Shriver:

This report transmits the results of the Reactor operator (RO) and Senior reactor operator (SRO) licensing examination conducted by the NRC during the period of August 9-17, 2004. This examination addressed areas important to public health and safety and was developed and administered using the guidelines of the “Examination Standards for Power Reactors” (NUREG-1021, Revision 9).

Based on the results of the examination, nine of ten Senior Reactor Operator and two of two Reactor Operator applicants passed all portions of the examination. One SRO failed the simulator examination. The twelve applicants included two ROs, two instant SROs and eight upgrade SROs. Mr. D’Antonio discussed performance insights observed during the examination with training and operations management during an examination out brief on August 17, 2004. On September 23, 2004, final examination results, including individual license numbers, were given during a telephone call between Mr. D’Antonio and the training department.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC’s Agencywide Documents Access and Management System (ADAMS). These records include the final examination and are available in ADAMS Package Accession Number ML030900773; RO and SRO Written - Accession Number ML042750523; RO and SRO Operating Section A - Accession Number ML042750524; RO and SRO Operating Section B - Accession Number ML042750525; and RO and SRO Operating Section C - Accession Number ML042750526), and Facility Post Examination Comments on the Written Exams - Accession No. ML042750521). ADAMS is accessible from the NRC public Web site at http://www.nrc.gov/reading-rm/adams.html.

Should you have any questions regarding this examination, please contact me at (610) 337-5183, or by E-mail at RJC@NRC.GOV.

Sincerely,

/RA/

Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

Docket Nos. 050000387/05000388
License Nos. NPF-14/22
Enclosure: Initial Examination Report No. 05000387/2004302 and 05000388/2004302

cc w/encl:
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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket Nos:	05000387/05000388
License No:	NPF-14/NPF-22
Report No:	05000387/2004302 and 05000388/2004302
Licensee:	Pennsylvania Power and Light Company
Facility:	Susquehanna Units 1 & 2
Dates:	August 6, 2004 (Written Examination Administration) August 9-17, 2004 (Operating Test Administration) August 23, 2004 (Facility Grading Complete) August 23 & September 15, 2004 (Post Exam Comment Letters) August 24-September 23, 2004 (Examination Grading)
Examiners:	Joseph D'Antonio, Operations Engineer (Chief Examiner) Gil Johnson, Operations Engineer Don Jackson, Operations Engineer
Approved by:	Richard J. Conte, Chief Operational Safety Branch Division of Reactor Safety

SUMMARY OF FINDINGS

IR 05000387/2004-302 & 05000388/2004-302; August 9-17, 2004; Susquehanna Nuclear Power Plant, Units 1 and 2; Initial Operator Licensing Examination. Eleven of twelve applicants passed the examination (two reactor operators, two SRO upgrades, and seven of eight SRO instants).

The written examinations were administered by the facility and the operating tests were administered by three NRC region-based examiners. There were no inspection findings of significance associated with the examinations.

A. Inspector Identified Findings

No findings of significance were identified.

B. Licensee Identified Findings

None.

Report Details

1. REACTOR SAFETY

Mitigating Systems - Reactor Operator (RO) and Senior Reactor Operator (SRO) Initial License Examination

a. Scope of Review

The NRC reviewed this facility, developed the written and operating initial examination, and verified or ensured, as applicable, the following:

- The examination was prepared and developed in accordance with the guidelines of Revision 9 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." A review was conducted both in the Region I office and at the Susquehanna Power Plant, Units 1 and 2 plant and training facility. Final resolution of comments and incorporation of test revisions were conducted during and following the onsite preparation week.

- Simulation facility operation was proper.

- A test item analysis was completed on the written examination for feedback into the systems approach to training program.

- Examination security requirements were met.

The NRC examiners administered the operating portion of the examination to all applicants from August 9-17, 2004. The written examination was previously administered by the Susquehanna Nuclear Power Plant training staff on August 6, 2004.

b. Findings

Grading and Results

Eleven of twelve applicants (seven of eight instant SROs, two upgrade SROs, and two ROs) passed all portions of the initial licensing examination. One SRO applicant failed the simulator examination.

The facility had three post exam comments which were resolved as discussed in attachment 2.

Examination Administration and Performance

The following two performance observations were noted during the administration of the simulator examinations:

The examiners noted that not all simulator charts were being advanced between scenarios. This was determined to be due to the "fast advance" feature from the control booth, without verifying that the charts had in fact advanced. The examiners determined that this did not affect crew performance in any scenario. This issue is addressed by AR598421.

In a scenario involving an ATWAS, the examiners noted that after the SRO dispatched personnel to locally trip the reactor, the reactor was tripped by a different method than the one he had called for, creating confusion for both the applicant and the examiners. This problem was due to the scenario guide not providing the booth operators with directions to cover the action actually requested by the SRO. The scenario guide also contained inappropriate direction to the booth operator to provide the local scram expeditiously to avoid the potential for plant conditions to reach a simulator operating limit. These issues are addressed in AR598761.

Other Issues

During final file reviews prior to issuing licenses, two problems were noted with the final applications:

- On one application, the applicant's signature was illegible.

- On another application, the applicant had not indicated a waiver request although there was prior correspondence in the docket file discussing a waiver requirement.

Final processing of licensing actions were delayed until resubmittal of corrected applications by the utility. These issues are addressed in AR604608.

4OA6 Exit Meeting Summary

On September 23, 2004, the NRC provided conclusions and examination results to Susquehanna Nuclear Power Plant Units 1 and 2 management representatives via telephone. License numbers for those applicants who passed their examinations were also provided during this time.

The NRC expressed appreciation for the cooperation and assistance that was provided during the preparation and administration of the examination by the licensee's training staff.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

LICENSEE

Rich Anderson .....Vice President of Nuclear Operations
Rocky Sgurro.....Manager, Nuclear regulatory Affairs
Bob Boesch.....Supervisor, Operations Instruction
John Seek.....Nuclear Operations Training Supervisor

NRC

Joseph D'Antonio Operations Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

ITEM NUMBER	TYPE	DESCRIPTION

NONE

ATTACHMENT 2

NRC RESOLUTION OF FACILITY COMMENTS

Question 16

Facility Comment:

The question stem presents a loss of suppression pool cooling with suppression pool level at 22'. The original correct answer calls for a shutdown of RCIC. This contradicts EO-100-103 which calls for running RCIC on recirc to raise level at this point. Delete question, no correct answer.

NRC Resolution:

Question deleted. The examiners reviewed the applicable EOP and determined that the facility is correct.

Question 41

Facility Comment:

Accept two correct answers, or delete the question due to no completely correct answer. The stem presents a situation in which the operator is required to manually withdraw TIPS to "ensure all isolations..." per EO-100-102.

The original correct answer "A" requires the operator to manually shut the ball valve as well. This is not necessary, since there is a limit switch which shuts the ball valve if the TIPS are fully withdrawn.

Answer "B" says "Withdraw TIPS, no further action necessary". Since this is correct if the ball valve automatically closes, accept it as a second correct answer.

If the NRC does not agree that "B" should be accepted on the grounds that "no further action" does not meet the facility definition of "ensure", then answer "A" is not correct because it includes more action than is required. This is the reason the applicant rejected "A" in favor of "B". In this case, neither answer can be considered fully correct, and the question should be deleted.

NRC Resolution:

Question deleted. There was no fully correct answer for this question.

The examiners reviewed the training material and procedures submitted by the facility and agree that fully withdrawing the TIPS actuates a limit switch which closes the ball valve. The examiner did not accept answer “B” because OI-AD-055 Att A “Approved Action Verb List” defines “Ensure” as “perform action which determines whether a parameter or piece of equipment is in desired condition and follow up with action to achieve desired condition if it is not”. The desired second correct answer does not meet this criteria in that “no further action” assumes the ball valve goes closed due to the full open limit switch, but does not verify that it did so. If the desired second answer had been “...check ball valve closed”, it would be accepted. The examiner agrees that answer “A” contains more action than is required due to the automatic closure of the ball valve, and agrees that a knowledgeable applicant could reject this answer because of that fact. Accordingly, there is no fully correct answer and the question is deleted.

Question 93

Facility Comment:

The question stem presents an instrument failure, but not enough information to determine if the failure was high or low. The question author assumed a “bellows failure” would mean a low failure, but the metal bellows in the actual instrument could fail due to over stretching as well as puncture. Additionally, the question requires the operator to know what functions the specific level channel provides, which is not expected memory knowledge. Delete the question.

NRC Resolution:

Comment partially accepted, question deleted. The NRC does not agree with the facility statement that it is unreasonable to expect the operator to realize that this channel feeds RCIC actuation logic. However, the inspectors reviewed the technical manual troubleshooting guide provided by the utility and concur that there are modes by which the bellows can fail either high or low. The question does not indicate which way the channel failed and provides no information which would allow the operator to deduce the failure. The question therefore provides insufficient information to determine an answer.