



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415**

March 1, 2012

Mr. Timothy S. Rausch
Senior Vice President and Chief Nuclear Officer
PPL Susquehanna, LLC
769 Salem Blvd.
Berwick, PA 18603-0467

**SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 - NRC
EXAMINATION REPORT 05000387/2012301 AND 05000388/2012301**

Dear Mr. Rausch:

On January 23, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Susquehanna Steam Electric Station, Units 1 and 2. The enclosed report documents the examination findings, which were discussed on February 23, 2012, with you and other members of your staff.

The examination included the evaluation of two applicants for reactor operator (RO) licenses, and two applicants for instant senior operator licenses. The written and operating examinations were developed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. One applicant for an instant senior reactor operator (SRO) and one applicant for RO failed the written portions of their exams and were denied licenses. One applicant for an instant SRO license and one applicant for an RO license passed the exam but their licenses are being held based on their written exam grades. Licenses for applicants with written exam passing grades of 82 percent or below are normally held for review until those applicants who failed the examination have had an opportunity to appeal their license denials.

No findings were identified during this examination.

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 document system Agencywide Document Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams/web-based.html> (the Public Electronic Reading Room).

Sincerely,

Donald E. Jackson, Chief
Operations Branch
Division of Reactor Safety

Mr. Timothy S. Rausch
Senior Vice President and Chief Nuclear Officer
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Sincerely,

/RA/

Donald E. Jackson, Chief
Operations Branch
Division of Reactor Safety

DOCUMENT NAME: G:\DRS\Operations Branch\CARUSO\Exam 12-Susq Jan 12 (U01842)\SUSQ EXAM REPORT.docx
ADAMS PKG: ML110190451 ADAMS ACCESSION NUMBER: ML12062A020

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NAME	JCaruso	DJackson			
DATE	2/28/12	3/1/12			

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T. Rausch

2

Docket Nos. 50-387, 50-388
License Nos. NPF-14, NPF-22

Enclosure:
NRC Initial Operator Licensing Examination Report
05000387/2012301 and 05000388/2012301
w/Attachment: Supplemental Information

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EXAMINATION REPORT

U.S. NUCLEAR REGULATORY COMMISSION REGION I

Dockets: 50-387, 50-388

Licenses: NPF-14, NPF-22

Report : 05000387/2012301 and 05000388/2012301

Licensee: PPL Susquehanna, LLC

Facility: Susquehanna Steam Electric Station, Units 1 and 2

Location: Berwick, PA

Dates: January 17-19, 2012 (Operating Test Administration)
January 23, 2012 (Written Examination Administration)
February 7, 2012 (Licensee Submitted Post Exam Package)
January 20 – February 23, 2012 (NRC Examination Grading)
February 23, 2012 (Exam Exit)

Examiners: John G. Caruso, Chief Examiner, Operations Branch
Todd Fish, Senior Operations Engineer (Part Time)
Joyce Tomlinson, Operations Engineer
Tom Hedigan, Operations Engineer
Christopher Lally, Operations Engineer (Certification Exam)
Manan Patel, Operations Engineer (Certification Exam)

Approved By: Donald E. Jackson, Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF FINDINGS

ER 05000387/2012301; 05000388/2012301; January 17 – February 23, 2012; Susquehanna Steam Electric Station, Units 1 and 2; Initial Operator Licensing Examination Report.

The examination included the evaluation of two applicants for reactor operator (RO) licenses and two applicants for instant senior operator licenses. The written and operating examinations were developed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. One applicant for an instant senior reactor operator (SRO) and one applicant for RO failed the written portions of their exams and were denied licenses. One applicant for an instant SRO license and one applicant for an RO license passed the exam but their licenses are being held based on their written exam grades. Licenses for applicants with written exam passing grades of 82 percent or below are normally held for review until those applicants who failed the examination have had an opportunity to appeal their license denials.

Reactor Safety

No findings were identified.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA5 Other Activities (Initial Operator License Examination)

.1 License Applications

a. Scope

The examiners reviewed all four license applications submitted by the licensee to ensure the applications reflected that each applicant satisfied relevant license eligibility requirements. The applications were submitted on NRC Form 398, "Personal Qualification Statement," and NRC Form 396, "Certification of Medical Examination by Facility Licensee." The examiners also audited all four of the license applications in detail to confirm that they accurately reflected the subject applicant's qualifications. This audit focused on the applicant's experience and on-the-job training, including control manipulations that provided significant reactivity changes.

b. Findings

No findings were identified.

.2 Operator Knowledge and Performance

a. Examination Scope

On January 23, 2012, the licensee proctored the administration of the written examinations to all four applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on February 7, 2012.

The NRC examination team administered the various portions of the operating examination to all four applicants on January 17-19, 2012. The two applicants for reactor operator licenses participated in two dynamic simulator scenarios, in a control room and facilities walkthrough test consisting of 11 system tasks, and an administrative test consisting of four administrative tasks. The two applicants seeking an instant senior operator license participated in three dynamic simulator scenarios, a control room and facilities walkthrough test consisting of 10 system tasks, and an administrative test consisting of five administrative tasks.

Enclosure

b. Findings

All four of the applicants passed all parts of the operating test. One instant senior reactor operator applicant and one reactor operator applicant failed the written examination. For the written examinations, the reactor operator applicants' average score was 78.0 percent and ranged from 76 to 80 percent; the senior operator applicants' average score was 74.5 percent and ranged from 68 to 81 percent. The overall written examination average was 76.25 percent. The text of the examination questions, the licensee's examination analysis, and the licensee's post-examination comments may be accessed in the the Agencywide Documents Access and Management System (ADAMS) system under the accession numbers noted in Attachment 1. In accordance with current NRC policy, the release of this written examination in ADAMS to the public will be delayed for 2 years.

The NRC examiners completed the final grading of the written examination on February 23, 2012, and conducted a review of each missed question to determine the accuracy and validity of the examination questions. In accordance with current NRC policy, the release of this written examination will be delayed for 2 years. The text of the examination questions, the licensee's examination analysis, and the licensee's post-examination comments may be accessed in the ADAMS system under the accession numbers noted in the attachment.

Chapter ES-403 and Form ES-403-1 of NUREG 1021 require the licensee to analyze the validity of any written examination questions that were missed by half or more of the applicants. The licensee conducted this performance analysis for 24 questions that met these criteria and submitted the analysis to the chief examiner. This analysis concluded that for 21 of the 24 questions remained valid as written and the remaining three questions were submitted with post examination comments.

The licensee submitted three post-examination questions comments on February 7, 2012. The NRC reviewed the facility's post-exam comment submittal package and accepted facility recommendations on all three of the questions submitted for consideration. The answer key was changed for Question 69 to accept answer "D" as a second correct answer, for Question 79 to accept answer "A" as a second correct answer, and for Question 86 to accept answer "D" as a second correct answer. The text of the examination questions, the licensee's examination analysis, and the licensee's post-examination comments with the NRC resolutions may be accessed in the ADAMS system under the accession numbers noted in the Attachment 1. In accordance with current NRC policy the release of this written examination will be delayed for 2 years.

.3 Initial Licensing Examination Development

a. Examination Scope

The NRC staff developed the examinations in accordance with NUREG-1021, Revision 9, Supplement 1. The NRC conducted an onsite pre-validation of the operating examinations the week of October 24, 2011 and a final validation of the operating examinations was conducted the week of December 12, 2011.

Enclosure

b. Findings

No findings were identified.

.4 Simulation Facility Performance

a. Examination Scope

The examiners observed simulator performance with regard to plant fidelity during the examination validation and administration.

b. Findings

No findings were identified.

.5 Examination Security

a. Examination Scope

The examiners reviewed examination security for examination development and during both the onsite preparation week and examination administration week for compliance with NUREG-1021 requirements. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel.

b. Findings

A potential exam security compromise occurred during pre-validation of exam scenarios on October 26, 2011. At the start of the pre-validation for one of the four Scenarios, the NRC Chief Examiner was informed that people working in the Technical Support Center (TSC) area located above the simulator were able to hear "alarms and voices" coming from within the simulator while running NRC simulator scenarios the previous day. The pre-validation was stopped and all individuals that were present (i.e., or had been present the previous day) in the Technical Support Center and classroom 20 were questioned and sound checks were conducted to determine if an exam compromise had occurred by both the NRC Chief Examiner and the Assistant Operations Manager-Shift. The NRC Chief Examiner's investigation determined that an exam compromise had not occurred. Immediate actions were taken to relocate all those working in the area and they were placed on the exam security agreement. In addition, the area was posted extending the exam security exclusion area to prevent access by those not on the exam security agreement. In the future, this area will be included as part of the posted exam security exclusion area when exams are being conducted in the simulator. This issue was documented in the licensee's corrective action report (CR 1484490).

Enclosure

4OA6 Meetings, Including Exit

The chief examiner presented the examination results to you and other members of your staff on February 23, 2012. The licensee acknowledged the findings presented.

The licensee did not identify any information or materials used during the examination as proprietary.

Attachments:

1. Supplemental Information
2. Simulator Fidelity Report

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

T. Rausch, Senior Vice President and Chief Nuclear Officer
R. Kearney, Site Vice President
T. Iliadis, General Manager of Operations
J. Goodbred, Operations Manager
C. Goff, Nuclear Training Manager
K. Griffith, Acting Operations Training Manager
D. Walsh, Assistant Operations Manager
G. Van Den Berg, Initial Licensed Operator Training Supervisor
M. Jacopetti, Nuclear Training Instructor
A. Thompson, Nuclear Training Instructor
T. North, Examination Reviewer
C. Dodge, Simulator Support

NRC Personnel

P. Finney, Senior Resident Inspector
J. Greives, Resident Inspector

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NONE

Opened and Closed

NONE

Closed

NONE

Discussed

NONE

ADAMS DOCUMENTS REFERENCED

Accession No. ML12054A204 – FINAL-Written Exam (Note: In accordance with current NRC policy, the release of this written examination in ADAMS to the public will be delayed for two years.)

Accession No. ML12054A208 – FINAL-Operating Exam

Accession No. ML12054A149 – FINAL-Post Exam Comments, Resolutions, and Technical References

ES-501**Simulator Fidelity Report****Attachment 2**

Facility Licensee: Susquehanna Steam
 Electric Station, Units 1
 and 2

Facility Docket No.: 50-387 and 50-388

Operating Test Administered on: January 17-
 19, 2012

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and, without further verification and review in accordance with IP 71111.11, are not indicative of noncompliance with 10 CFR 55.46. No licensee action is required in response to these observations.

While conducting the simulator portion of the operating tests, examiners observed the following items:

Item

CR- 1521464	Simulator prematurely went to freeze during performance of both runs for exam scenario #1. Fortunately, this occurred close to the expected scenario termination point and examiners determined they had observed enough to properly evaluate the applicants.

Item	Procedural Issues Identified	Attachment 3
1	<p>EOP guidance for overriding LP ECCS prior to rapidly depressurizing during an ATWS – currently allows for a potential injection if not well managed by the CRS:</p> <ul style="list-style-type: none"> • EO-000-113 step LQ/L-18 • OP-149(249)-001 section 2.8 and Attachment A • OP-151(251)-001 section 2.7 and Attachment A <p>(CR 1526406)</p>	
2	<p>ON-117-001 Attachment E for loss of 1Y218: Incorrectly states that the 'A' RRP MG Set Scoop Tube Locks (i.e., actual power supply from 1Y128 and 1D615) Consideration should be given to moving important actions from the end of all attachments to list in order of priority.</p> <p>(AR 1526905)</p>	
3	<p>ON-117-001, Attachment B, doesn't include a load list for 1Y128</p> <p>(AR 1526908)</p>	
4	<p>TRO 3.8.7, Bases document was not revised to reflect the deletion of the Category C limits for station batteries.</p> <p>(AR/OPG 1525725)</p>	
5	<p>OP-164-001, section 2.8.7, guidance requiring an individual present at the scoop tubes with resetting scoop tube locks is no longer required due to the ICS/DCS modification.</p> <p>(AR/EWR 1527000)</p>	
6	<p>ES-150-003, step 4.4.8, refers to step 4.3.2; it should be corrected to read 4.4.2. This same fix is required in ES-250-003.</p> <p>(AR/OPG 1527267)</p>	
7	<p>Operator actions for withdrawing a rod to position 48 are not consistent between OP-156-001 and SO-156-007. Contrary to procedural guidance to release one notch before target position, operators maintain outward rod motion until rod stops at 48 and coupling checks/stall flows are documented. This same fix is required in OP-256-001 and SO-256-007.</p> <p>(AR/OPG 1525840)</p>	
8	<p>TM-OP-051-OB, objective 2093, does not list an objective for predicting the system response to a LOCA.</p> <p>(AR/NTG 1525864)</p>	

9	Typo in OP-069-050, step 2.2.15; incorrect valve HV-06432A2 instead of HV-06432A1. (AR/OPG 1525730)
10	TR 3.8.7 bases, page TRM/B 3.8-19, makes mention of Category C battery parameters. This category of battery parameters has been deleted. TRM updated but bases not updated to reflect the change. (AR/OPG 1525725)
11	TS 3.6.4.1, Action A, temporary condition refers to a reactor building recirculation fan damper replacement whose applicability expired December 31, 2005. Station to remove this temporary condition during the next License Amendment Request.
12	OP-181-001, page 13, typo in note says, "Hoist Tube Hand Up" vice "Hoist Tube Hang Up". (AR/OPG 1525800)
13	OP-142-001, Attachment B, performance of this attachment to recover circulating water pumps tripped by an auxiliary bus load shed requires closing of the circulating pump suction and discharge valves, which is not mentioned in the attachment. In addition, OP-142-001, Attachment B, worded poorly, tells performer to startup circulating water pumps in accordance with one of the following methods, but does not give methods to correspond to choices, merely subsequent procedure steps. (CR 1525814)
14	ON-103-003, directs restoring EHC in accordance with OP-193-001; in fact the correct procedure is OP-193-003. (AR/OPG 1525786)
15	Inconsistency in description of HV-144-F033, RWCU Blowdown Flow Control Valve operation; TM-OP-044-ST says it will re-open once RPV level reaches 39", and OP-161-001 states 33". (AR/NTG 1525907)
16	TM-OP-064E PowerPoint and Fact Sheet, does not match Student Text for Limiter #1 time delay on total feedwater flow. PowerPoint and Fact Sheet, states 20 seconds, Student Text, states 15 seconds. AR-102-001 (C01) and (C04) say 15 seconds. (AR/NTG 1525745)