



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I**
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

May 14, 2015

Mr. Bryan Hanson
Senior Vice President, Exelon Generation
President and Chief Nuclear Officer, Exelon Nuclear
4300 Winfield Rd.
Warrenville, IL 60555

SUBJECT: LIMERICK GENERATING STATION, UNITS 1 AND 2 –
NRC INITIAL OPERATOR LICENSING EXAMINATION REPORT
NOS. 05000352/2015301 AND 05000353/2015301

Dear Mr. Hanson:

On January 23, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Limerick Generating Station, Units 1 and 2. The enclosed report documents the examination findings, which were discussed on March 12, 2015, with Messrs. M. Gillin, R. Ruffe, and other members of your staff.

The examination included the evaluation of seven applicants for reactor operator licenses, four applicants for instant senior operator licenses, and one applicant for upgrade senior operator license. The written and operating examinations were developed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1.

The license examiners determined that all 12 of the 12 applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses were issued on March 12, 2015.

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 Documents Access and Management System (ADAMS).

B. Hanson

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Sincerely,

/RA/

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

Docket Nos. 05000352; 05000353
License Nos. NPF-39; NPF-85

Enclosure:
NRC Initial Operator Licensing Examination
Report Nos. 05000352 and 05000353/2015301

cc w/encl: via List Serv

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EXAMINATION REPORT

**U.S. NUCLEAR REGULATORY COMMISSION
REGION I**

Dockets: 50-352, 50-353
Licenses: NPF-39, NPF-85
Report: 05000352/2015301; 05000353/2015301
Licensee: Exelon Nuclear
Facility: Limerick Generating Station, Units 1 and 2
Location: 3146 Sanatoga Rd
Pottstown, PA 19464
Dates: January 12, 2015 – January 16, 2015 (Operating Test Administration)
January 23, 2015 (Written Examination Administration)
March 9, 2015 (Licensee Submitted Post Exam Package)
January 18-March 12, 2015 (NRC Examination Grading)
March 12, 2015 (Licenses Issued)
Examiners: P. Presby, Chief Examiner, Operations Branch
J. D'Antonio, Senior Operations Engineer
C. Lally, Operations Engineer
T. Dunn, Operations Engineer
Approved By: Donald E. Jackson, Chief
Operations Branch
Division of Reactor Safety

SUMMARY

ER 05000352/2015301 and 05000353/2015301; January 12-23, 2015; Limerick Generating Station, Units 1 and 2; Initial Operator Licensing Examination Report.

NRC examiners evaluated the competency of seven applicants for reactor operator licenses, four applicants for instant senior operator licenses and one applicant for upgrade senior operator license at Limerick Generating Station, Units 1 and 2. The facility licensee developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. The written examination was administered by the facility on January 23, 2015. NRC examiners administered the operating tests on January 12 – 16, 2015. The license examiners determined that all 12 of the 12 applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA5 Other Activities (Initial Operator License Examination)

.1 License Applications

a. Scope

The examiners reviewed all 12 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 examiner also audited three 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, 2015, the licensee proctored the administration of the written examinations to all 12 applicants. The licensee staff graded the written examinations, analyzed the results, presented their analysis to the NRC on February 6, 2015, and presented additional post-exam comment supporting information on March 9, 2015.

The NRC examination team administered the various portions of the operating examination to all 12 applicants on January 12 - 16, 2015. The seven applicants for reactor operator licenses participated in two or three dynamic simulator scenarios, in a control room and facilities walkthrough test consisting of eleven system tasks, and an administrative test consisting of four administrative tasks. The four applicants seeking an instant senior operator license participated in three dynamic simulator scenarios, a control room and facilities walkthrough test consisting of ten system tasks, and an administrative test consisting of five administrative tasks. The one applicant for upgrade senior operator license participated in three dynamic simulator scenarios, a control room and facilities walkthrough test consisting of five system tasks, and an administrative test consisting of five administrative tasks.

Enclosure

b. Findings

All 12 of the applicants passed all parts of the operating test. For the written examinations, the reactor operator applicants' average score was 88.61 percent and ranged from 81.08 to 94.59 percent, the senior operator applicant's average score was 89.18 percent and ranged from 85.71 to 91.84 percent. The overall written examination average was 88.85 percent. 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 Attachment 1.

In accordance with current NRC policy, the release of this written examination in ADAMS to the public will be delayed for two years.

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 seven questions that met these criteria. This analysis concluded that two of the questions each had two correct answers the key for two other questions should reflect a different correct answer and that one question should be deleted from the exam.

The licensee submitted five post-examination question comments on February 6, 2015, and submitted additional supporting information on March 9, 2015. The NRC reviewed the facility's post-exam comment submittal package and accepted facility recommendations on two of the five questions.

- For Q19 and Q28, the facility recommended and the NRC accepted two answers, Choices A and B, for each of these questions.
- For Q26 and Q93, the facility recommended changing the key answer (from A to D, and from B to A, respectively). The NRC did not agree and instead deleted both Q26 and Q93 from the exam.
- For Q81, the facility recommended question deletion. The NRC did not agree and instead accepted Choices C and D as correct answers.

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 two years.

Enclosure

.3 Initial Licensing Examination Development

a. Examination Scope

The facility licensee developed the examinations in accordance with NUREG-1021, Revision 9, Supplement 1. All licensee facility training and operations staff involved in examination preparation and validation were listed on a security agreement.

The facility licensee submitted both the written and operating examination outlines on October 17, 2014. The chief examiner reviewed the outlines against the requirements of NUREG-1021, and provided comments to the licensee. The facility licensee submitted the draft examination package on November 25, 2014. The chief examiner reviewed the draft examination package against the requirements of NUREG-1021, and provided comments to the licensee on the examination on December 5, 2014.

The NRC conducted an onsite validation of the operating examinations and provided further comments during the week of December 15, 2014. The licensee satisfactorily completed comment resolution on January 9, 2015.

b. Findings

The NRC approved the initial examination outline and advised the licensee to proceed with the operating examination development.

The examiners determined that the written and operating examinations initially submitted by the licensee were within the range of acceptability expected for a proposed examination.

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

No findings were identified.

4OA6 Meetings, Including Exit

The chief examiner presented the examination results to Mr. M. Gillin, Director of Operations, and other members of the licensee's management staff on March 12, 2015. The licensee acknowledged the findings presented.

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

4OA7 Licensee-Identified Violations

No findings were identified.

ATTACHMENTS:

Supplemental Information

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

D. Molteni, Operations Training Manager
J. Weissinger, Shift Operations Manager
K. Ryder, Exam Developer
L. Stanford, Exam Developer

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NONE

Opened and Closed

NONE

Closed

NONE

Discussed

NONE

ADAMS DOCUMENTS REFERENCED

Accession No. ML15100A274 – 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. ML15100A037 – FINAL-Operating Exam

Accession No. ML15072A208 – FINAL-Post Exam Comments, Resolutions, and Technical References