



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, ILLINOIS 60532-4352

January 5, 2018

Mr. Bryan C. Hanson
Senior VP, Exelon Generation Company, LLC
President and CNO, Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

**SUBJECT: BYRON STATION, UNITS 1 AND 2—NRC INITIAL LICENSE EXAMINATION
REPORT 05000454/2017301; 05000455/2017301**

Dear Mr. Hanson:

On December 21, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Byron Station, Units 1 and 2. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on December 12, 2017, with yourself and other members of your staff. An exit meeting was conducted by telephone on December 22, 2017, with members of your staff, and Mr. M. Bielby, Chief Operator Licensing Examiner, to review the final grading of the written examination for the license applicants.

The NRC examiners administered an initial license examination operating test during the weeks of December 4 and December 11, 2017. The written examination was administered by Byron Station training department personnel on December 14, 2017. Six Senior Reactor Operator and five Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on December 22, 2017. Eleven applicants passed all sections of their respective examinations; six applicants were issued a senior operator license and five applicants were issued operator licenses.

The administered written examination and operating test, as well as documents related to the development and review (outlines, review comments and resolution, etc.) of the examination will be withheld from public disclosure until December 14, 2019.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Robert J. Orlikowski, Chief
Operations Branch
Division of Reactor Safety

Docket Nos. 50-454; 50-455
License Nos. NPF-37; NPF-66

Enclosures:

1. OL Examination Report 05000454/2017301; 05000455/2017301
2. Simulation Facility Fidelity Report

cc: Distribution via LISTSERV®
J. Nichols, Training Director, Byron Station

Letter to Bryan C. Hanson from Robert Orlikowski dated January 5, 2018

SUBJECT: BYRON STATION, UNITS 1 AND 2—NRC INITIAL LICENSE EXAMINATION
REPORT 05000454/2017301; 05000455/2017301

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REGION III

Docket Nos: 05000454; 05000455
License Nos. NPF-37; NPF-66

Report No: 05000454/2017301; 05000455/2017301

Licensee: Exelon Generation Company, LLC

Facility: Byron Station, Units 1 and 2

Location: Byron, IL

Dates: December 4-21, 2017

Examiners: M. Bielby, Senior Operations Engineer - Chief Examiner
R. K. Walton, Senior Operations Engineer - Examiner
J. Seymour, Operations Engineer - Examiner

Approved by: R. Orlikowski, Chief
Operations Branch
Division of Reactor Safety

SUMMARY

Examination Report 05000454/2017301; 05000455/2017301; 12/04/2017–12/21/2017; Exelon Generation Company, LLC; Byron Station, Units 1 and 2; Initial License Examination Report.

The announced initial operator licensing examination was conducted by regional U.S. Nuclear Regulatory Commission examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11.

Examination Summary

Eleven of eleven applicants passed all sections of their respective examinations. Six applicants were issued senior operator licenses and five applicants were issued operator licenses (Section 4OA5.1).

REPORT DETAILS

40A5 Other Activities

.1 Initial Licensing Examinations

a. Examination Scope

The U.S. Nuclear Regulatory Commission (NRC) examiners and members of the facility licensee's staff used the guidance prescribed in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11, to develop, validate, administer, and grade the written examination and operating test. The written examination outlines were prepared by the NRC staff and were transmitted to the facility licensee's staff. Members of the facility licensee's staff prepared the operating test outlines and developed the written examination and operating test. The NRC examiners validated the proposed examination during the week of November 13, 2017, with the assistance of members of the facility licensee's staff. During the onsite validation week, the examiners audited three license applications for accuracy. The NRC examiners, with the assistance of members of the facility licensee's staff, administered the operating test, consisting of job performance measures and dynamic simulator scenarios, during the period of December 4 through December 12, 2017. The facility licensee administered the written examination on December 14, 2017.

b. Findings

(1) Written Examination

The NRC examiners determined that the written examination, as proposed by the licensee, was within the range of acceptability expected for a proposed examination. Less than 20 percent of the proposed examination questions were determined to be unsatisfactory and required modification or replacement.

During the validation of the written examination, several questions were modified or replaced. All changes made to the written examination were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and were documented on Form ES-401-9, "Written Examination Review Worksheet." The Form ES-401-9, the written examination outlines (ES-401-2 and ES-401-3), and both the proposed and final written examinations, will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS) on December 14, 2019 (ADAMS Accession Numbers ML17152A381, ML17152A385, ML17152A386, and ML17152A380, respectively).

On December 21, 2017, the licensee submitted documentation noting that there were no post-examination comments for consideration by the NRC examiners when grading the written examination.

The NRC examiners graded the written examination on December 21, 2017, and conducted a review of each missed question to determine the accuracy and validity of the examination questions.

(2) Operating Test

The NRC examiners determined that the operating test, as originally proposed by the licensee, was within the range of acceptability expected for a proposed examination.

Following the review and validation of the operating test, minor modifications were made to several Job Performance Measures, and some minor modifications were made to the dynamic simulator scenarios. All changes made to the operating test were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and were documented on Form ES-301-7, "Operating Test Review Worksheet." The Form ES-301-7, the operating test outlines (ES-301-1, ES-301-2, and ES-D-1s), and both the proposed and final operating tests, will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS on December 14, 2019 (ADAMS Accession Numbers ML17152A381, ML17152A385, ML17152A386, and ML17152A380, respectively).

The NRC examiners completed operating test grading on December 21, 2017.

(3) Examination Results

Six applicants at the Senior Reactor Operator level and five applicants at the Reactor Operator level were administered written examinations and operating tests.

- Eleven applicants passed all portions of their examinations and were issued their respective operating licenses on December 22, 2017.

.2 Examination Security

a. Scope

The NRC examiners reviewed and observed the licensee's implementation of examination security requirements during the examination validation and administration to assure compliance with Title 10 of the *Code of Federal Regulations*, Section 55.49, "Integrity of Examinations and Tests." The examiners used the guidelines provided in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," to determine acceptability of the licensee's examination security activities.

b. Findings

None

4OA6 Management Meetings

.1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on December 12, 2017, to Mr. J. Nichols, Training Director, and other members of the Byron Station staff.

.2 Exit Meeting

The chief examiner conducted an exit meeting on December 22, 2017, with Mr. J. Nichols, Training Director, and other members of the Byron Station staff, by telephone. The examiners asked the licensee whether any of the material used to develop or administer the examination should be considered proprietary. Proprietary or sensitive information identified during the examination or debrief/exit meetings will be handled in accordance with the applicable requirements.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Nichols, Training Director
H. Welt, Operations Director
C. Cote, Shift Operations Supervisor
R. Lawlor, Operations Training Manager
M. Davis, Operations Shift Manager
B. Hines, Lead Operations Instructor
M. Kultgen, Senior Operations Training Instructor
Z. Cox, Regulatory Assurance NRC Coordinator

U.S Nuclear Regulatory Commission

J. McGhee, Senior Resident Inspector
C. Hunt, Resident Inspector
M. Bielby, Senior Operations Engineer – Chief Examiner
R. K. Walton, Senior Operations Engineer
J. Seymour, Operations Engineer

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened, Closed, and Discussed

None

LIST OF ACRONYMS USED

ADAMS	Agencywide Document Access and Management System
NRC	U.S. Nuclear Regulatory Commission

SIMULATION FACILITY FIDELITY REPORT

Facility Licensee: Byron Station

Facility Docket Nos: 50-454 and 50-455

Operating Tests Administered: December 4 through 12, 2017

The following documents observations made by the NRC examination team during the initial operator license examination. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with Title 10 of the *Code of Federal Regulations*, Part 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

ITEM	DESCRIPTION
None	N/A