



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

April 28, 2016

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 05000454/2016301;  
05000455/2016301

Dear Mr. Hanson:

On March 29, 2016, 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 March 23, 2016, with Mr. J. Nichols, Training Director, and other members of your staff. An exit meeting was conducted by telephone on April 7, 2016, between Mr. J. Nichols of your staff and Mr. M. Bielby, Senior Operator Licensing Examiner, to review the proposed final grading of the written examination for the license applicants. During the telephone conversation, the NRC verified with Mr. Nichols that the station had no post examination comments, as originally received by the NRC on March 29, 2016.

The NRC examiners administered an initial license examination operating test during the weeks of March 14 and March 21, 2016. The written examination was administered by Byron Station Training Department personnel on March 25, 2016. Five Senior Reactor Operator and six Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on April 7, 2016. All applicants passed all sections of their respective examinations and were issued applicable operator licenses.

The written examination and other related written examination documentation will be withheld from public disclosure for 24 months per your request.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public

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inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA/*

Robert Orlikowski, Chief  
Operations Branch  
Division of Reactor Safety

Docket No. 50-454; 50-455  
License No. NPF-37; NPF-66

Enclosures:

1. OL Examination Report 05000454/2016301;  
05000455/201630
2. Simulation Facility Fidelity Report

cc: Distribution via ListServ  
J. Nichols, Training Director, Byron

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-454; 50-455

License No: NPF-37; NPF-66

Report No: 05000454/2016301(DRS); 05000455/2016301(DRS)

Licensee: Exelon Generation Company, LLC

Facility: Byron Station, Units 1 and 2

Location: Byron, IL

Dates: March 14 – March 29, 2016

Inspectors: M. Bielby, RIII Chief Examiner  
D. McNeil, RIII Examiner  
D. Reeser, RIII Examiner

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

## **SUMMARY**

ER 05000454/2016301; 05000455/2016301; 03/14/2016-03/29/2016; 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 (NRC) examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 10.

### Examination Summary:

Eleven of eleven applicants passed all sections of their respective examinations.

Five applicants were issued senior operator licenses and six applicants were issued operator licenses. No applicants failed any section of the examination. (Section 40A5.1).

## 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 10, to develop, validate, administer, and grade the written examination and operating test. Members of the facility licensee's staff prepared the outline and developed the written examination and operating test. The NRC examiners validated the proposed examination during the week of February 16, 2016, with the assistance of members of the facility licensee's staff. During the on-site validation week, the examiners audited all of the 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 (JPMs) and dynamic simulator scenarios, during the period of March 14 through March 23, 2016. The facility licensee administered the written examination on March 25, 2016.

##### 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.

All changes made to the proposed written examination were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and documented on Form ES-401-9, "Written Examination Review Worksheet," which 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). (ADAMS Accession Number ML16116A362)

On March 29, 2016, the licensee submitted documentation noting that there were no post-examination comments for consideration by the NRC examiners when grading the written examination. The proposed written examination (ADAMS Accession Number ML16116A342), as well as the final as-administered examination and answer key (ADAMS Accession Number ML16109A011), will be available in 24 months electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS.

The NRC examiners graded the written examination on April 7, 2016, 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.

Changes made to the operating test, documented in a document titled, "Operating Test Comments," as well as the final as administered dynamic simulator scenarios and JPMS, are available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. (ADAMS Accession Numbers ML16116A365; ML16109A064; ML16109A092; ML16109A074; ML16109A096)

The NRC examiners completed operating test grading on April 7, 2016.

(3) Examination Results

Five applicants at the Senior Reactor Operator level and six applicants at the Reactor Operator level were administered written examinations and operating tests. All eleven applicants passed all portions of their examinations and were issued their respective operating licenses.

.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

No findings were identified.

4OA6 Management Meetings

.1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on March 23, 2016, to J. Nichols, Training Director, and other members of the Byron Station Operations and Training Department staff.

.2 Exit Meeting

The chief examiner conducted an exit meeting on April 7, 2016, with J. Nichols, Training Director, by telephone. The NRC confirmed there were no post-examination comments. The chief examiner asked whether any of the material used to develop or administer the examination should be considered proprietary. One test item reference was identified as proprietary information and will be withheld from the examination material released to the public.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

J. Nichols, Training Director  
M. Coffman, Operations Lead Instructor  
A. Corrigan, Regulatory Assurance  
E. Hernandez, Operations Director  
R. Lawlor, Operations Training Manager  
B. Lewin, Shift Manager  
B. Peters, Shift Operations Superintendent  
R. Peterson, Exam Author  
D Spitzer, Regulatory Assurance Manager

#### U.S. Nuclear Regulatory Commission

J. Draper, Byron Resident Inspector  
M. Bielby, Chief Examiner  
D. McNeil, Examiner

### **ITEMS OPENED, CLOSED, AND DISCUSSED**

#### Opened, Closed, Discussed

None

### **LIST OF ACRONYMS USED**

ADAMS	Agency-Wide Document Access and Management System
CFR	<i>Code of Federal Regulations</i>
JPM	Job Performance Measures
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System





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Robert Orlikowski, Chief  
Operations Branch  
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J. Nichols, Training Director, Byron

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