



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, ILLINOIS 60532-4352

May 29, 2019

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

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3—NRC INITIAL  
LICENSE EXAMINATION REPORT 05000237/2019301 AND 05000249/2019301

Dear Mr. Hanson:

On April 24, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Dresden Nuclear Power Station. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on April 18, 2019, with Mr. P. Karaba, Site Vice President, and other members of your staff. An exit meeting was conducted by telephone on May 9, 2019, with Mr. J. M. Condreay, Operations Training Manager, other members of your staff, and Mr. G. Roach, Chief Operator Licensing Examiner, to review the final grading of the written examination for the license applicants. The NRC also confirmed that the station submitted documentation noting that there were no post-examination comments for consideration during NRC grading of the examination.

The NRC examiners administered an initial license examination operating test during the weeks of April 8, 2019, and April 15, 2019. The written examination was administered by Dresden Nuclear Power Station training department personnel on April 18, 2019. Nine Senior Reactor Operator and four Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on May 13, 2019. Thirteen applicants passed all sections of their respective examinations. Nine applicants were issued senior operator licenses and four applicants were issued operator licenses.

The written examination, administered 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 April 24, 2021.

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 Title 10 of the *Code of Federal Regulations*, Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

**/RA/**

David E. Hills, Acting Chief  
Operations Branch  
Division of Reactor Safety

Docket Nos. 50-237; 50-249  
License Nos. DPR-19; DPR-25

Enclosures:

1. OL Examination  
Report 05000237/2019301; 05000249/2019301
2. Simulator Fidelity Report

cc: Distribution via LISTSERV®  
D. Thomas, Training Manager

Letter to Bryan C. Hanson from David E. Hills dated May 29, 2019.

SUBJECT: DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3—NRC INITIAL  
LICENSE EXAMINATION REPORT 05000237/2019301 AND 05000249/2019301

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 05000237; 05000249

License Nos: DPR-19; DPR-25

Report No: 05000237/2019301; 05000249/2019301

Enterprise Identifier: L-2018-OLL-0003

Licensee: Exelon Generation Company, LLC

Facility: Dresden Nuclear Power Station, Units 2 and 3

Location: Morris, IL

Dates: April 8, 2019, through April 24, 2019

Examiners: G. Roach, Senior Operations Engineer, Chief Examiner  
T. Dunn, Operations Engineer, Examiner  
D. Reeser, Operations Engineer, Examiner  
B. Bergeon, Operations Engineer, Examiner

Approved by: D. Hills, Acting Chief  
Operations Branch  
Division of Reactor Safety

## **SUMMARY**

Examination Report 05000237/2019301; 05000249/2019301; 04/08/2019-04/24/2019;  
Exelon Generation Company, LLC; Dresden Nuclear Power Station, Units 2 and 3;  
Initial License Examination Report.

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

### Examination Summary

Thirteen applicants passed all sections of their respective examinations. Nine applicants were issued senior operator licenses and four applicants were issued operator licenses. (Section 4OA5.1)

## **REPORT DETAILS**

### 4OA5 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 March 11, 2019, with the assistance of members of the facility licensee's staff. During the on-site 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 April 8, 2019, through April 17, 2019. The facility licensee administered the written examination on April 18, 2019.

##### 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-401-1 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 April 24, 2021 (ADAMS Accession Numbers ML17214A858, ML17214A855, ML17214A856, and ML17214A854, respectively).

On April 24, 2019, 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 April 26, 2019, 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 April 24, 2021, (ADAMS Accession Numbers ML17214A858, ML17214A855, ML17214A856, and ML17214A854, respectively).

The NRC examiners completed operating test grading on May 13, 2019.

## (3) Examination Results

Nine applicants at the Senior Reactor Operator level and four applicants at the Reactor Operator level were administered written examinations and operating tests.

Thirteen applicants passed all portions of their examinations. Thirteen applicants were issued their respective operating licenses on May 13, 2019.

## .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*, Part 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

Two minor examination security-related issues were identified during operating test exam administration. In the first instance, an applicant noted a simulator procedure contained place-keeping markups that had not been sanitized following the previous scenario administration. Upon identifying the markups, the applicant immediately closed the procedure and reported the discrepancy to their NRC examiner of record. In the second instance, the simulator did not perform a complete reset following scenario administration and certain digital trend recorders maintained data from the previous crew's scenario at the start of the next scenario. The trend recorder which could have provided actual exam information to the crew was located on a back panel and was manually reset by the training staff before any applicants could assess the information. The NRC staff determined that in both instances, the examination security-related issues did not affect the fair and equitable administration of the examination. Nor did they require the replacement of examination material.

#### 4OA6 Management Meetings

##### .1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on April 18, 2019, to Mr. P. Karaba, Site Vice President, and other members of the Dresden Nuclear Power Station staff.

##### .2 Exit Meeting

The chief examiner conducted an exit meeting on May 9, 2019, with Mr. J. M. Condreay, Operations Training Manager, and other members of the Dresden Nuclear Power Station staff, by telephone. The chief examiner asked the licensee whether any of the material used to develop or administer the examination should be considered proprietary. No proprietary or sensitive information was identified during the examination or debrief/exit meetings.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

P. Karaba, Site Vice President  
P. Hansett, Plant Manager  
M. Martin, Operations Manager  
D. Thomas, Training Manager  
A. Schuerman, Engineering Director  
J. M. Condreay, Operations Training Manager  
J. Nelson, Lead NRC Exam Developer  
W. Cope, NRC Exam Developer  
B. Franzen, Regulatory Affairs Manager

#### U.S. Nuclear Regulatory Commission

A. Nguyen, Senior Resident Inspector  
R. Elliott, Resident Inspector  
G. Roach, Senior Operations Engineer, Chief Examiner  
D. Reeser, Operations Engineer, Examiner  
B. Bergeon, Operations Engineer, Examiner  
T. Dunn, Operations Engineer, Examiner

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

#### Opened, Closed, and Discussed

None

### **LIST OF ACRONYMS USED**

ADAMS	Agencywide Document Access and Management System
FRV	Feedwater Regulating Valve
NRC	U.S. Nuclear Regulatory Commission
SWR	Simulator Work Request

## SIMULATOR FIDELITY REPORT

Facility Licensee: Dresden Nuclear Power Station

Facility Docket No: 50-237; 50-249

Operating Tests Administered: April 8, 2019, through April 17, 2019

The following documents observations made by the U.S. Nuclear Regulatory Commission 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 U.S. Nuclear Regulatory Commission 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
1. 2A Feedwater Regulating Valve (FRV) Controller Reset and Single Element Mode of Feedwater Control	During Simulator Scenario 1, crews 2 through 4 did not receive a 2A FRV reset permissive light when conditions warranted, resulting in the licensee's training staff having to interject that the applicant crews had indication that the controller could be reset. In addition, the Feedwater Level Control System did not allow the applicants to manually select the Single Element mode of operation. These issues were captured by the licensee under Simulator Work Request (SWR) 135166.
2. Simulator Freeze-up During Scenario	During Simulator Scenario 2, crew 1 experienced a simulator freeze-up. The crew was sequestered outside the simulator control room until the condition was corrected by the simulator support staff, and the scenario could be restarted from the point where the freeze-up occurred. This was captured by the licensee under SWR 135166.
3. Simulator Trend Recorders Not Reset	During Simulator Scenario 3, with crew 3 in the simulator, the NRC examiners noted that some of the digital trend recorders included data from the last scenario. The examiners identified a trend recorder which could provide pertinent exam security information to the applicants and ensured the training staff manually reset it prior to being observed by any applicants. This issue was captured by the licensee under SWR 135178.