



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

July 25, 2011

Mr. Michael J. Pacilio  
Senior Vice President, Exelon Generation Company, LLC  
President and Chief Nuclear Officer (CNO), Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

**SUBJECT:** QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2  
NRC INITIAL LICENSE EXAMINATION REPORT 05000254/2011301(DRS);  
05000265/2011301(DRS)

Dear Mr. Pacilio:

On June 24, 2011, the U. S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Quad Cities Nuclear Power Station, Units 1 and 2. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on June 10, 2011, with Mr. M. Prospero and other members of your staff. An exit meeting was conducted via telephone on June 29, 2011, between Mr. K. Moser, Training Director, of your staff and Mr. C. Moore, Operator Licensing Examiner, to review the proposed final grading of the written examination for the license applicants.

The NRC examiners administered an initial license examination operating test during the weeks of May 31, 2011, through June 10, 2011. The written examination was administered by Quad Cities Station training department personnel on June 13, 2011. Eight Senior Reactor Operator and five Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on July 7, 2011. Thirteen applicants passed all sections of their respective examinations and six were issued senior operator licenses and five were issued operator licenses. Two senior operator licenses were withheld pending receipt of requested medical information for one applicant and certification of completion of experience requirements for the second applicant. The NRC will issue senior operator licenses to these two applicants upon receipt of the required documentation.

Per the Quad Cities Training Director's request, the written examination and other related written examination documentation will be withheld from public disclosure for 24 months.

M. Pacilio

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

***/RA by B. Palagi for/***

Hironori Peterson, Chief  
Operations Branch  
Division of Reactor Safety

Docket No. 50-254, 50-265  
License No. DPR-29; DPR-30

Enclosures: 1. Operator Licensing Examination Report 05000254/2011301(DRS);  
05000265/2011301(DRS)  
w/Attachment: Supplemental Information  
2. Simulation Facility Report

cc w/encls: Distribution via ListServ

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-254; 50-265

License No: DPR-29; DPR-30

Report No: 05000254/2011301(DRS); 05000265/2011301(DRS)

Licensee: Exelon Generation Company, LLC

Facility: Quad Cities Nuclear Power Station, Units 1 and 2

Location: Cordova, Illinois

Dates: May 31, 2011, through June 24, 2011

Inspectors: Carl Moore, Operations Engineer, Chief Examiner  
Mike Bielby, Senior Operations Engineer  
Nick Valos, Senior Reactor Analyst

Approved by: Hironori Peterson, Chief  
Operations Branch  
Division of Reactor Safety

## **SUMMARY OF FINDINGS**

ER 05000254/2011301(DRS); 05000265/2011301(DRS); 05/31/2011-06/24/2011;  
Exelon Generation Company, LLC; Quad Cities Nuclear Power Station, Units 1 and 2; 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 9 - Supplement 1.

### Examination Summary:

Thirteen applicants passed all sections of their respective examinations and six were issued  
senior operator licenses and five were issued operator licenses. Two senior operator licenses  
were withheld pending receipt of requested medical information for one applicant and  
certification of completion of experience requirements for the second applicant. The NRC will  
issue senior operator licenses to these two applicants upon receipt of the required  
documentation. (Section 40A5.1)

## REPORT DETAILS

### 40A5 Other

#### .1 Initial Licensing Examinations

##### a. Examination Scope

The 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 9-Supplement 1, 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 May 2, 2011, with the assistance of members of the facility licensee's staff. During the on-site validation week, the examiners audited two 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 May 31, 2011 through June 10, 2011. The facility licensee administered the written examination on June 13, 2011.

##### b. Findings

###### (1) Written Examination

The NRC examiners determined that the written examination, as submitted 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 submitted 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" (ADAMS Accession Number ML11200A093), which will be available in 24 months electronically in the NRC Public Document Room or from the Publicly Available Records System component of NRC's document system (ADAMS).

On June 24, 2011, the licensee submitted documentation noting that there were no post-examination comments for consideration by the NRC examiners when grading the written examination. The final as-administered examination and answer key (ADAMS Accession Number ML11196A192), will be available in 24 months electronically in the NRC Public Document Room or from ADAMS.

The NRC examiners graded the written examination on June 29, 2011, 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 submitted 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 (ADAMS Accession Number ML11200A096) in the NRC Public Document Room or from the Publicly Available Records System component of NRC's document system (ADAMS).

The NRC examiners completed grading of the operating test on July 7, 2011.

(3) Examination Results

Eight applicants at the Senior Reactor Operator (SRO) level and five applicants at the Reactor Operator (RO) level were administered written examinations and operating tests. All thirteen applicants passed all sections of their respective examinations and six were issued senior operator licenses and five were issued operator licenses. Two senior operator licenses were withheld pending receipt of requested medical information for one applicant and certification of completion of experience requirements for the second applicant. The NRC will issue senior operator licenses to these two applicants upon receipt of the required documentation.

.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 10 CFR 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

There were three exam security issues identified during the operating test portion of the Examination. The first occurrence was occurred when the facility's simulator operator did not properly establish the scenario's initial conditions prior to the applicants entering the simulator. As the applicants were entering the simulator the simulator operator informed the station's training representative that the simulator setup was not complete. The applicants were directed to a location where they could not see the simulator operator reposition several valves to complete the setup. Because the applicants had not started their walk-down of the control room panels and did not see which switches were re-positioned, it was determined that no compromise of the examination material had occurred.

The second occurrence occurred when an annunciator response procedure was found with markings in it from the previous scenario. Later, during the same scenario, a procedural attachment for recording temperature data was discovered in the simulator that had data recorded on it from the previous scenario. It was determined that the annunciator procedure markings did not lead or provide any guidance to the applicant that would provide an unfair advantage for the applicant taking the test. For the data

sheet discovered in the simulator, the applicant who discovered the sheet immediately covered the sheet with his hand, ripped it from its tablet, and handed it to an NRC examiner without looking at the recorded information. Because the data the applicant needed to record was different than the numbers written on the sheet from the first scenario, it was determined that the applicant had gained no unfair advantage with the discovery of the data sheet. Because no unfair advantage was gained by any of the applicants for these security issues, it was determined that there was no compromise of examination material. All of these examination security issues have been entered into the station's corrective action procedure under Issue Report 1228477.

#### 4OA6 Meetings

##### .1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on June 10, 2011, to Mike Proposero, Plant Manager, and other members of the Quad Cities Station Operations and Training Department staff.

##### .2 Exit Meeting

The chief examiner conducted an exit meeting on June 29, 2011, with Karl Moser, Training Director, via telephone. The NRC's final disposition of the station's post-examination comments were disclosed and discussed with Mr. Moser during the telephone discussion. 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

M. Prospero, Plant Manager  
K. Moser, Training Director  
D. Haas, Operations Training Manager  
R. Venci, Examination Lead

#### NRC

J. McGee, Senior Resident Inspector  
B. Cushman, Resident Inspector  
C. Moore, Chief Examiner  
M. Bielby, Senior Examiner  
N. Valos, Senior Examiner

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

#### Opened, Closed, and Discussed

None

### **LIST OF DOCUMENTS REVIEWED**

None

### **LIST OF ACRONYMS USED**

ADAMS	Agency-Wide Document Access and Management System
CFR	Code of Federal Regulations
DRS	Division of Reactor Safety
JPM	Job Performance Measures
NRC	U.S. Nuclear Regulatory Commission
RO	Reactor Operator
SRO	Senior Reactor Operator

## SIMULATION FACILITY REPORT

Facility Licensee:                      Quad Cities Nuclear Power Station  
Facility Docket No:                    50-254; 50-265  
Operating Tests Administered:       5/31/2011-6/10/2011

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 10 CFR 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	None

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