



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

July 31, 2024

David Rhoades  
Senior Vice President  
Constellation Energy Generation, LLC  
President and Chief Nuclear Officer (CNO)  
Constellation Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2 - NRC INITIAL  
LICENSE EXAMINATION REPORT 05000254/2024301; 05000265/2024301

Dear David Rhoades:

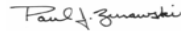
On June 12, 2024, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Quad Cities Nuclear Power Station. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on June 03, 2024, with Drew Griffiths, Plant Manager, and other members of your staff. An exit meeting was conducted via Microsoft Teams on July 1, 2024, between Doug Hild of your staff and Bryan Bergeon, Chief Examiner, to review the proposed final grading of the written examination for the license applicants. During the conversation, the NRC resolutions of any post-examination comments submitted by the facility, initially received by the NRC on June 12, 2024, were discussed.

The NRC examiners administered an initial license examination operating test during the weeks of May 28, 2024 and June 03, 2024. The written examination was administered by Quad Cities Nuclear Power Station's training department personnel on June 06, 2024. Seven Senior Reactor Operator and five Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on June 26, 2024. Twelve applicants passed all sections of their respective examinations. Seven were issued senior operator licenses and five were issued operator licenses, effective June 27, 2024.

The as-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 June 12, 2026. The enclosure contains details of this report.

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,



Signed by Zurawski, Paul  
on 07/31/24

Paul J. Zurawski, Chief  
Operations Branch  
Division of Operating Reactor Safety

Docket Nos. 50-254; 50-265  
License Nos. DPR-29; DPR-30

Enclosure:

1. Examination Report 05000254/2024301;  
05000265/2024301
2. Simulator Fidelity Report

cc: Distribution via LISTSERV®  
R. Merema, Training Manager  
Quad Cities Nuclear Power Station

Letter to David Rhoades from Paul J. Zurawski dated July 31, 2024.

SUBJECT: QUAD CITIES NUCLEAR POWER STATION, UNITS 1 AND 2 - NRC INITIAL LICENSE EXAMINATION REPORT 05000254/2024301; 05000265/2024301

DISTRIBUTION:

Michelle Simmons  
RidsNrrDorLp13  
RidsNrrPMQuadCities Resource  
RidsNrrDrolrib Resource  
Jack Giessner  
Mohammed Shuaibi  
Diana Betancourt-Roldan  
Allan Barker  
David Curtis  
Jonathan Feibus  
R3-DORS  
Ikeda Betts  
Maryia Bahdanovich-Kniazkova

ADAMS Accession Number: ML24213A311

OFFICE	RIII/DORS/OB:CE	RIII/DORS/OB:BC
NAME	BBergeon:gmp	PZurawski
DATE	07/31/2024	07/31/2024

**OFFICIAL RECORD COPY**

U.S. NUCLEAR REGULATORY COMMISSION

REGION 3

Docket No: 50-254; 50-265

License No: DPR-29; DPR-30

Report No: 05000254/2024301  
05000265/2024301

Enterprise Identifier L-2024-OLL-0008

Licensee: Constellation Energy Generation, LLC

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

Location: Cordova, IL

Dates: May 28, 2024 to June 12, 2024

Examiners: B. Bergeon, Senior Operations Engineer, Chief Examiner  
C. Hunt, Senior Resident Inspector, Examiner  
T. Henning, Senior Operations Engineer, Examiner  
T. Wingfield, Operations Engineer, Examiner  
J. Correll, Reactor Engineer, Examiner

Approved by: P. Zurawski, Chief  
Operations Branch  
Division of Operating Reactor Safety

## SUMMARY OF FINDINGS

ER 05000254/2024301; 05000265/2024301; 05/28/2024-06/12/2024; Constellation Energy Generation, LLC; Quad Cities Nuclear Power Station, Units 1 and 2; Initial License Examination Report.

The announced initial operator licensing examination was conducted by regional and program office Nuclear Regulatory Commission (NRC) examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 12.

### Examination Summary:

Twelve of twelve applicants passed all sections of their respective examinations. Seven applicants were issued senior operator licenses, and five applicants were issued operator licenses. (Section 4OA5.1).

## REPORT DETAILS

### 4OA5 Other Activities

#### .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 12, 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 developed the operating test outlines and developed the written examination and operating test. The NRC examiners validated the proposed examination during the week of April 22, 2024, with the assistance of members of the facility licensee's staff. During the on-site validation week, the examiners audited all twelve 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 28, 2024 through June 03, 2024. The facility licensee administered the written examination on June 06, 2024.

##### b. Findings

###### (1) Written Examination

The NRC examiners determined that the written examination, as proposed by the licensee, exceeded the range of acceptability expected for a proposed examination. Greater than 20 percent of the proposed examination questions were determined to be unsatisfactory and required modification or replacement, however, the examination was considered to be a satisfactory submittal based on exercised discretion in accordance with Operator Licensing Manual Chapter (OLMC) 510, Operator Licensing Examination Reports, section C.a. OLMC-510 is publicly available in the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS), Accession Number ML23052A114.

During validation of the written examination, several questions were modified or replaced. 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 2.3-5, "Written Examination Review Worksheet." The Form 2.3-5, the written examination outlines, 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 June 12, 2026, (ADAMS Accession Numbers for the following: Administrative Files ML22251A230, Examination Outlines ML22251A229, Proposed Exam ML22251A228, and As-Administered Exam ML22251A233, respectively).

On June 12, 2023, 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

June 13, 2024, and conducted a review of each missed question to determine the accuracy and validity of the examination questions. Post-examination analysis revealed no generic weaknesses in applicant performance.

(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. Less than 20 percent of the proposed operating test portion of the examination was determined to be unsatisfactory and required modification or replacement.

During the validation of the operating test, several Job Performance Measures (JPMs) were modified or replaced, and some modifications were made to the dynamic simulator scenarios. Changes made to the operating test portion of the examination, were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and documented on Form 2.3-3, "Operating Test Review Worksheet." The Form 2.3-3, the operating test outlines, and both the proposed and final as administered dynamic simulator scenarios and JPMs, will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS on June 12, 2026, (ADAMS Accession Numbers for the following: Administrative Files ML22251A230, Examination Outlines ML22251A229, Proposed Exam ML22251A228, and As-Administered Exam ML22251A233 respectively).

The NRC examiners completed operating test grading on June 26, 2024. Post-examination analysis revealed generic weaknesses in applicant performance in the areas of control rod drive system operation and diagnosis, knowledge of the standby gas treatment system standby lineup, application of the standby gas treatment system instrumentation technical specifications, procedure use and adherence (taking actions from memory when the actions were not designated as immediate operator actions), inconsistent placekeeping of procedures, and setting SCRAM / reactor trip criteria during transient conditions. The licensee documented these general weaknesses in their corrective action program under condition report 4780443.

(3) Examination Results

Seven applicants at the Senior Reactor Operator (SRO) level and five applicants at the Reactor Operator (RO) level were administered written examinations and operating tests. Twelve applicants passed all portions of their examinations and were issued their respective operating licenses on June 27, 2024.

.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 Meetings

### .1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on June 03, 2024, to Drew Griffiths, Plant Manager and other members of the Quad Cities Nuclear Power Station's Operations and Training Department staff.

### .2 Exit Meeting

The chief examiner conducted an exit meeting on July 1, 2024, with Doug Hild via Microsoft Teams. The NRC's final disposition of the station's grading of the written examination and post-examination comments were disclosed and discussed. The chief examiner asked the licensee whether any of the retained submitted 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

Doug Hild, Site Vice President  
Drew Griffiths, Plant Manager  
Adnan Ali, Operations Director  
Derek Drockelman, Shift Operations Supervisor  
Ryan Merema, Senior Manager, Training  
Sean Sullivan, Operations Training Manager  
Tom Resig, Initial License Training Lead  
Dave Basham, Initial License Training Instructor  
Travis Kelley, Exam Author  
Rick Swart, Regulatory Assurance  
Rachel Luebbe, Regulatory Assurance  
Tom Dean, Corporate Training Director  
Chris Burkhart, Regulatory Exam Expert

#### U.S. Nuclear Regulatory Commission

C. Hunt, Senior Resident Inspector, Examiner  
B. Bergeon, Chief Examiner  
T. Henning, Examiner  
T. Wingfield, Examiner  
J. Correll, Examiner

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

#### Opened, Closed, and Discussed

None

### **LIST OF ACRONYMS USED**

ADAMS	Agencywide Document Access and Management System
JPM	Job Performance Measure
NRC	U.S. Nuclear Regulatory Commission
OLMC	Operator Licensing Manual Chapter
RO	Reactor Operator
SRO	Senior Reactor Operator

## SIMULATION FACILITY FIDELITY REPORT

Facility Licensee: Quad Cities Nuclear Power Station

Facility Docket No: 50-254; 50-265

Operating Tests Administered: May 28, 2024 through June 03, 2024

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
SWR 0139136	1A RHR Pump Switch Degraded. When the pump switch was taken to pull-to-lock, the switch slipped down and made up the contacts for the OFF light.