



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE RD, STE 102  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

August 16, 2022

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

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 – INITIAL  
OPERATOR LICENSING EXAMINATION REPORT 05000317/2022301 AND  
05000318/2022301

Dear David Rhoades:

On July 14, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Calvert Cliffs Nuclear Power Plant, Units 1 and 2. The enclosed examination report documents the examination results, which were discussed on August 2, 2022, with Pete Moodie, Plant Manager, and other members of your staff.

The examination included the evaluation of three applicants for reactor operator licenses, five applicants for instant senior reactor operator licenses, and one applicant for an upgrade senior reactor operator license. The written and operating examinations were developed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 12. The license examiners determined that all nine applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, and the appropriate licenses were issued on August 2, 2022.

No findings were identified during this examination.

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,

Donald E. Jackson, Chief  
Operations Branch  
Division of Operating Reactor Safety

Docket Nos. 05000317 and 05000318  
License Nos. DPR-53 and DPR-69

Enclosure:  
As stated

cc w/ encl: Distribution via LISTSERV®

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 – INITIAL OPERATOR LICENSING EXAMINATION REPORT 05000317/2022301 AND 05000318/2022301 DATED AUGUST 16, 2022

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**EXAMINATION REPORT****U.S. NUCLEAR REGULATORY COMMISSION  
REGION I**

Docket Numbers: 05000317 and 05000318

License Numbers: DPR-53 and DPR-69

Report Numbers: 05000317/2022301 and 05000318/2022301

Licensee: Constellation Energy Generation, LLC

Enterprise Identifier: L-2022-OLL-0005

Facility: Calvert Cliffs Nuclear Power Plant, Units 1 and 2

Location: Lusby, MD

Dates: July 11 – 14, 2022 (Operating Test Administration)  
July 20, 2022 (Written Examination Administration)  
July 21, 2022 (Licensee Submitted Post Exam Package)  
July 25 – 29, 2022 (NRC Examination Grading)  
August 2, 2022 (Licenses Issued)

Examiners: T. Setzer, Chief Examiner, Operations Branch  
B. Fuller, Senior Operations Engineer  
T. Hedigan, Operations Engineer  
P. Ott, Operations Engineer  
B. Dyke, Operations Engineer (in training)  
S. Elkhiamy, Operations Engineer (in training)

Approved By: Donald E. Jackson, Chief  
Operations Branch  
Division of Operating Reactor Safety

## SUMMARY

ER 05000317/2022301 and 05000318/2022301; 07/11/2022 – 07/20/2022; Calvert Cliffs Nuclear Power Plant, Units 1 and 2; Initial Operator Licensing Examination Report.

Four NRC examiners evaluated the competency of three applicants for reactor operator licenses, five applicants for instant senior reactor operator licenses, and one applicant for an upgrade senior reactor operator license. The NRC developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 12.

The written examination was administered by the facility on July 20, 2022. NRC examiners administered the operating tests on July 11 – 14, 2022. The NRC examiners determined that all nine applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, and the appropriate licenses have been issued.

No findings were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA5 Other Activities Initial Operator License Examination

##### .1 License Applications

###### a. Scope

The examiners reviewed all license applications submitted by the licensee to ensure the applications reflected that each applicant satisfied relevant license eligibility requirements. The applications were submitted on NRC Form 398, "Personal Qualification Statement," and NRC Form 396, "Certification of Medical Examination by Facility Licensee." The examiners also audited 10 percent of the license applications in detail to confirm that they accurately reflected the subject applicant's qualifications. This audit focused on the applicant's experience and on-the-job training, including control manipulations that provided significant reactivity changes.

###### b. Findings

No findings were identified.

##### .2 Operator Knowledge and Performance

###### a. Examination Scope

On July 20, 2022, the licensee proctored the administration of the written examinations to all applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on July 21, 2022.

The NRC examination team administered the various portions of the operating examination to all applicants on July 11 – 14, 2022. The applicants for reactor operator licenses participated in two dynamic simulator scenarios, a control room and facilities walkthrough test consisting of 11 system tasks, and an administrative test consisting of four administrative tasks. The applicants seeking an instant senior reactor operator license participated in two dynamic simulator scenarios, a control room and facilities walkthrough test consisting of 10 system tasks, and an administrative test consisting of five administrative tasks. The applicant seeking an upgrade senior reactor license participated in two dynamic simulator scenarios, a control room and facilities walkthrough test consisting of five system tasks, and an administrative test consisting of five administrative tasks.

###### b. Findings

All nine applicants passed all parts of the operating test and the written examination. For the written examinations, the reactor operator applicants' average score was 93.7 percent and ranged from 93.3 to 96.0 percent; the senior reactor operator applicants' average score was 92.0 percent and ranged from 89.0 to 96.0 percent. The text of the examination questions may be accessed in the ADAMS system under the accession

numbers noted in the Attachment. In accordance with current NRC policy, the release of this written examination in ADAMS to the public will be delayed for two years.

Chapter ES-4.4 of NUREG 1021 requires the licensee to analyze the validity of any written examination questions that were missed by half or more of the applicants. Licensee training staff performed this analysis and forwarded it to the Chief Examiner. There were no post-examination comments provided by the licensee.

### .3 Initial Licensing Examination Development

#### a. Examination Scope

The NRC developed the examinations in accordance with NUREG-1021, Revision 12. All licensee facility training and operations staff involved in examination preparation and validation were listed on a security agreement. The NRC developed the written exam outline and provided it to the licensee on December 28, 2021. The NRC submitted the operating examination outline on February 11, 2022. The NRC submitted the draft examination package on April 27, 2022. The Chief Examiner reviewed the draft examination package against the requirements of NUREG-1021 and provided comments to the exam authors. The NRC conducted an onsite validation of the operating examinations and provided further comments during the week of June 20, 2022.

#### b. Findings

The examiners determined that the written and operating examinations were within the range of acceptability expected for a proposed examination.

No findings were identified.

### .4 Simulation Facility Performance

#### a. Examination Scope

The examiners observed simulator performance with regard to plant fidelity during the examination validation and administration.

#### b. Findings

No findings were identified.

### .5 Examination Security

#### a. Examination Scope

The examiners reviewed examination security for examination development and during both the onsite preparation week and examination administration week for compliance with NUREG-1021, Revision 12 requirements. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

The Chief Examiner presented the examination results to Pete Moodie, Plant Manager, and other members of the licensee's staff on August 2, 2022. The licensee acknowledged the observations presented.

The licensee did not identify any information or materials used during the examination as proprietary.

**ATTACHMENT: SUPPLEMENTARY INFORMATION**



**SUPPLEMENTARY INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

Pete Moodie – Plant Manager

Chris Jackson – Director of Organization Performance and Regulatory Affairs

Dave Lewis – Director of Site Operations

Jenn Norris – Senior Manager of Site Training

Alyssa Gambino – Operations Training Manager

Jason Bone – ILT Lead Instructor

Eric Truslow – ILT Instructor

Troy Okel – ILT Instructor

Megan Parlett – Exam Author

Kevin Swiger – Exam Author

**ITEMS OPENED, CLOSED, AND DISCUSSED**

None

**ADAMS DOCUMENTS REFERENCED**

Accession No. ML22220A146 – FINAL-Written Exam (Note: In accordance with current NRC policy, the release of this written examination in ADAMS to the public will be delayed for 2 years.)

Accession No. ML22220A113 – FINAL-Operating Exam (Note: In accordance with current NRC policy, the release of this operating examination in ADAMS to the public will be delayed for 2 years.)