



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

January 26, 2023

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: LIMERICK GENERATING STATION, UNITS 1 AND 2 – INITIAL OPERATOR
LICENSING EXAMINATION REPORT 05000352/2023301 AND
05000353/2023301

Dear David Rhoades:

On December 12, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Limerick Generating Station, Units 1 and 2. The enclosed examination report documents the examination results, which were discussed on January 12, 2023, with Michael Gillin, Site Vice President, and other members of your staff.

The examination included the evaluation of three applicants for reactor operator licenses, seven applicants for instant senior reactor operator licenses, and two applicants for upgrade senior reactor operator licenses. 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 twelve applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, and the appropriate licenses were issued on January 12, 2023.

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. 50-352 and 50-353
License Nos. NPF-39 and NPF-85

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: LIMERICK GENERATING STATION, UNITS 1 AND 2 – INITIAL OPERATOR LICENSING EXAMINATION REPORT 05000352/2023301 AND 05000353/2023301 DATED JANUARY 26, 2023

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

Docket Numbers: 05000352 and 05000353

License Numbers: NPF-39 and NPF-85

Report Numbers: 05000352/2023301 and 05000353/2023301

Licensee: Constellation Energy Generation, LLC

Enterprise Identifier: L-2023-OLL-0012

Facility: Limerick Generating Station, Units 1 and 2

Location: Pottstown, PA

Dates: December 5–12, 2022 (Operating Test Administration)
December 15, 2022 (Written Examination Administration)
December 20, 2022 (Licensee Submitted Post Exam Package)
January 3–9, 2023 (NRC Examination Grading)
January 12, 2023 (Licenses Issued)

Examiners: T. Setzer, Chief Examiner, Operations Branch
T. Fish, Sr. Operations Engineer
J. Kepley, Operations Engineer (in training)
C. Lally, Sr. Operations Engineer
K. Murphy, Operations Engineer
P. Ott, Operations Engineer

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

SUMMARY

ER 05000352/2023301 and 05000353/2023301; 12/05/2022 – 12/15/2022; Limerick Generating Station, Units 1 and 2; Initial Operator Licensing Examination Report.

Five NRC examiners evaluated the competency of three applicants for reactor operator licenses, seven applicants for instant senior reactor operator licenses, and two applicants for upgrade senior reactor operator licenses. 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 December 15, 2022. NRC examiners administered the operating tests on December 5–12, 2022. The NRC examiners determined that all twelve 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 December 15, 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 December 20, 2022.

The NRC examination team administered the various portions of the operating examination to all applicants on December 5–12, 2022. The applicants for reactor operator licenses participated in at least 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 at least 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 applicants seeking upgrade senior reactor licenses participated in one dynamic simulator scenario, a control room and facilities walkthrough test consisting of five system tasks, and an administrative test consisting of five administrative tasks.

b. Findings

All twelve applicants passed all parts of the operating test and the written examination. For the written examinations, the reactor operator applicants' average score was 90.6 percent and ranged from 84.0 to 96.0 percent; the senior reactor operator applicants' average score was 90.0 percent and ranged from 85.0 to 94.0 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 licensee 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 licensee submitted the operating examination outline on July 8, 2022. The chief examiner reviewed the outlines against the requirements of NUREG-1021 and provided comments to the licensee. The facility licensee submitted the draft examination package on September 21, 2022. The chief examiner reviewed the draft examination package against the requirements of NUREG-1021 and provided comments to the licensee on the examination on October 16, 2022. The NRC conducted an onsite validation of the operating examinations and provided further comments during the week of October 31, 2022. The licensee satisfactorily completed comment resolution on November 11, 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 Michael Gillin, Site Vice President, and other members of the licensee's staff on January 12, 2023. 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

Michael Gillin, Site Vice President

Matthew Bonanno, Plant Manager

Nicholas Favorito, Director Organizational Performance and Regulatory

William Levis, Director Site Operations

Rachel Heath, Shift Operations Superintendent

Ryan Harris, Senior Manager Site Training (Acting)

Daniel Semeter, Manager Operations Training

Jarrett Griffin, Operations Instructor – Lead

Kristen Lauria, Operations Instructor – Lead

Seth Mitten, Senior Operations Training Instructor

ITEMS OPENED, CLOSED, AND DISCUSSED

None

ADAMS DOCUMENTS REFERENCED

Accession No. ML23017A108 – 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. ML23017A098 – 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.)