



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

November 5, 2019

Mr. Rod Penfield
Site Vice President
First Energy Nuclear Operating Company
Beaver Valley Power Station
P. O. Box 4 – Route 168
Shippingport, PA 15077-0004

SUBJECT: BEAVER VALLEY POWER STATION, UNIT 2 – INITIAL OPERATOR
LICENSING EXAMINATION REPORT 05000412/2019301

Dear Mr. Penfield:

On October 10, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Beaver Valley Power Station, Unit 2. The enclosed examination report documents the examination results, which were discussed on October 31, 2019, with Mr. William Cothen, Site Training Manager, and other members of your staff.

The examination included the evaluation of five applicants for reactor operator licenses, one applicant for instant senior reactor operator license, 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 11. The license examiners determined that all the applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, and the appropriate licenses were issued on October 31, 2019.

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 the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

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

Docket No. 50-412
License No. NPF-73

Enclosure:
Examination Report 05000412/2019301

cc w/encl: Distribution via ListServ

SUBJECT: BEAVER VALLEY POWER STATION, UNIT 2 – INITIAL OPERATOR
 LICENSING EXAMINATION REPORT 05000412/2019301 DATED
 NOVEMBER 5, 2019

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

Docket No: 50-412

License No: NPF-73

Report No: 05000412/2019301

Enterprise Identifier: L-2019-OLL-0018

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Beaver Valley Power Station, Unit 2

Location: Shippingport, PA

Dates: October 7–10, 2019 (Operating Test Administration)
October 15, 2019 (Written Examination Administration)
October 24, 2019 (Licensee Submitted Post Exam Package)
October 29, 2019 (NRC Examination Grading)
October 31, 2019 (Licenses Issued)

Examiners: D. Silk, Chief Examiner, Operations Branch
C. Lally, Operations Engineer
P. Ott, Operations Engineer
M. Patel, Operations Engineer

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

Enclosure

SUMMARY

ER 05000412/2019301; 10/7/2019 – 10/10/2019; Beaver Valley Power Station, Unit 2; Initial Operator Licensing Examination Report.

Four NRC examiners evaluated the competency of five reactor operator applicants, one applicant for an instant senior reactor operator license, and two applicants for senior reactor operator upgrade licenses at Beaver Valley Power Station, Unit 2. The facility licensee developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11. The NRC examiners administered the operating tests on October 7–10, 2019. The written examination was administered by the facility on October 15, 2019. The NRC examiners determined that all applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55 and the appropriate licenses were issued on October 31, 2019.

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 the license applications submitted by the facility licensee to ensure that each applicant satisfied the 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 audit also focused on the applicants' experience and control manipulations that provided significant reactivity changes.

b. Findings

No findings were identified.

.2 Operator Knowledge and Performance

a. Examination Scope

On October 15, 2019, the licensee proctored the administration of the written examinations to all eight applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on October 24, 2019.

The NRC examination team administered the various portions of the operating examination to the applicants on October 7–10, 2019. The five applicants seeking reactor operator licenses participated in two or three dynamic simulator scenarios, a control room and facilities walkthrough test consisting of 11 system tasks, and an administrative test consisting of four tasks. The applicant seeking an instant senior reactor operator license participated in three dynamic simulator scenarios, a control room and facilities walkthrough test consisting of ten system tasks, and an administrative test consisting of five tasks. The two applicants seeking senior reactor operator upgrade licenses participated in three dynamic simulator scenarios, a control room and facilities walkthrough test consisting of five system tasks, and an administrative test consisting of five tasks.

b. Findings

All of the applicants passed all parts of the examination. For the written examinations, the overall examination average score was 88.2 percent and ranged from 81.0 to 96.0 percent. The average scores for the reactor operator and senior reactor operator exams were 88.8 and 78.7 percent, respectively. The text of the examination questions and the operating test may be accessed in the ADAMS system under the accession numbers noted in the Attachment. In accordance with current NRC policy, the release of the examination material in ADAMS to the public will be delayed for approximately two years from the date of the administration of the written examination.

The NRC examiners completed the final grading of the written examination on October 28, 2019, and conducted a review of each missed question to determine the accuracy and validity of the examination questions. Chapter ES-403 and Form ES-403-1 of NUREG-1021 require the licensee to analyze the validity of any written examination questions that were missed by half or more of the applicants. The licensee conducted this performance analysis for nine questions that met these criteria and submitted the analysis to the chief examiner. The licensee did not submit any post-examination comments.

.3 Initial Licensing Examination Development

a. Examination Scope

The facility licensee developed the examinations in accordance with NUREG-1021, Revision 11. All licensee facility training and operations staff involved in examination preparation and validation were listed on a security agreement. The NRC provided the facility licensee with the written exam outline on October 26, 2018. The facility licensee submitted operating examination outlines on May 9, 2019. 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 July 24, 2019. The chief examiner reviewed the draft examination package against the requirements of NUREG-1021 and provided comments to the licensee. The NRC conducted an onsite validation of the operating examinations and provided further comments during the week of September 2, 2019. The licensee satisfactorily completed comment resolution for the operating test and the written examination by September 27, 2019.

b. Findings

The NRC approved the initial examination outline and advised the licensee to proceed with the operating examination development.

The examiners determined that the written and operating examinations initially submitted by the licensee 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 weeks.

b. Findings

No findings were identified.

.5 Examination Security

a. Examination Scope

The examiners reviewed the examination security protocols for this examination effort during both the onsite preparation week and examination administration week for compliance with NUREG-1021, Revision 11, 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 Mr. W. Cothen, Site Training Manager, and other members of the licensee on October 31, 2019. The licensee acknowledged the findings 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

W. Cothen, Site Training Manager
T. Gaydosik, Fleet Exam Development Lead
M. Klingensmith, Exam Developer
P. Eisenmann, Exam Developer

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NONE

Closed

NONE

Discussed

NONE

ADAMS DOCUMENTS REFERENCED

Accession No. ML19302F311 - 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 two years.)

Accession No. ML19302F487 – 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 two years.)