



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

November 1, 2012

Mr. Paul A. Harden  
Site Vice President  
FirstEnergy Nuclear Operating Company  
Beaver Valley Power Station  
P. O. Box 4, Route 168  
Shippingport, PA 15077-0004

SUBJECT: BEAVER VALLEY POWER STATION, UNIT 2 - NRC INITIAL  
OPERATOR LICENSING EXAMINATION REPORT 05000412/2012302

Dear Mr. Harden:

On October 3, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Beaver Valley Power Station Unit 2. The enclosed report documents the examination findings, which were discussed on October 18, 2012, with Mr. C. Hynes, Operations Training Manager, and other members of your staff.

The examination included the evaluation of three applicants for reactor operator licenses and seven applicants for instant senior operator licenses. The written and operating examinations were developed using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. The license examiners determined that all of the applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, and the licenses will be issued upon notification of completion of eligibility requirements.

No findings were identified during this examination.

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

Sincerely

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

Mr. Paul A. Harden  
 Site Vice President  
 FirstEnergy Nuclear Operating Company  
 Beaver Valley Power Station  
 P. O. Box 4, Route 168  
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Sincerely,

/RA/

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

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P. Harden

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Docket No. 050-00412

License No. NPF-73

Enclosure:

NRC Initial Operator Licensing Examination

Report 05000412/2012302

w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

**EXAMINATION REPORT**

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

Docket: 50-412

License: NPF-73

Report : 05000412/2012302

Licensee: FirstEnergy Nuclear Operating Company (FENOC)

Facility: Beaver Valley Power Station Unit 2

Location: Shippingport, PA 15077

Dates: 9/24-28/2012 (Operating Test Administration)  
10/3/2012 (Written Examination Administration)  
10/10/2012 (Licensee Submitted Post Exam Package)  
10/10/2012 (NRC Examination Grading)  
Licenses will be issued upon completion of eligibility requirements.

Examiners: D. Silk, Chief Examiner, Operations Branch  
J. D'Antonio, Senior Operations Engineer  
C. Lally, Operations Engineer

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

## SUMMARY OF FINDINGS

ER 05000412/2012302; 9/24/2012 - 10/3/2012; Beaver Valley Power Station Unit 2; Initial Operator Licensing Examination Report.

NRC examiners evaluated the competency of three applicants for reactor operator licenses and seven applicants for instant senior operator 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 9, Supplement 1. The written examination was administered by the facility on October 3, 2012. NRC examiners administered the operating tests on September 24 - 28, 2012. The license examiners determined that all of the applicants satisfied the requirements of 10 CFR Part 55, and the licenses will be issued upon completion of eligibility requirements.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

## 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 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. However, it was determined by the examiners that the licensee had inappropriately taken credit for feedwater control manipulations (at reactor power greater than 15 percent) as reactivity manipulations. This resulted in the licensee submitting revised applications for all of the applicants in which waivers (deferrals) were requested for the completion of the reactivity manipulations until after the examination. These waivers were granted by the Region.

##### .2 Operator Knowledge and Performance

###### a. Examination Scope

On October 3, 2012, the licensee proctored the administration of the written examinations to 10 applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on October 10, 2012.

The NRC examination team administered the various portions of the operating examination to 10 applicants on September 24-28, 2012. The three applicants for reactor operator licenses participated in three dynamic simulator scenarios, in a control room and facilities walkthrough test consisting of 11 system tasks, and an administrative test consisting of four administrative tasks. The seven applicants seeking instant senior operator licenses participated in three dynamic simulator scenarios, a control room and facilities walkthrough test consisting of 10 system tasks, and an administrative test consisting of five administrative tasks.

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b. Findings

The NRC examiners completed the final grading of the written examination on October 10, 2012, and conducted a review of each missed question to determine the accuracy and validity of the examination questions. All of the applicants passed all parts of the operating test and the written examination. For the written examination, the reactor operator applicants' average score was 84.4 percent and ranged from 82.7 to 86.7 percent while the senior operator applicants' average score was 86.7 percent and ranged from 83.0 to 90.0 percent. The overall written examination average was 86.0 percent. The text of the examination questions may be accessed in the Agencywide Documents Management System (ADAMS) system under the accession numbers noted in Attachment 1. 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-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 seven questions that met this criterion and submitted the analysis to the chief examiner. The licensee generated Condition Report CR-2012-15668 to address any potential training weaknesses pertaining to these questions.

The licensee submitted no post-examination comments.

3. Initial Licensing Examination Development

a. Examination Scope

The facility licensee developed the examinations in accordance with NUREG-1021, Revision 9, Supplement 1. All licensee facility training and operations staff involved in examination preparation and validation were listed on a security agreement. The facility licensee submitted both the written and operating examination outlines on July 2, 2012. 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 August 3, 2012. The chief examiner reviewed the draft examination package against the requirements of NUREG-1021, and provided comments to the licensee on the examination on August 10, 2012. The NRC conducted an onsite validation of the operating examinations and provided further comments during the week of August 27, 2012. The licensee satisfactorily completed comment resolution on September 5, 2012.

b. Findings

The NRC approved the initial examination outlines and advised the licensee to proceed with the 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.

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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 requirements. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel.

b. Findings

No findings were identified.

40A6 Meetings, Including Exit

The chief examiner presented the examination results to Mr. C. Hynes, Operations Training Manager, and other members of the licensee's staff on October 18, 2012. The licensee acknowledged the findings presented.

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

Attachment:  
Supplemental Information

Enclosure



**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

W. Rudolph, Superintendent Operations Training  
T. Gaydosik, Supervisor Initial Operator Training  
R. Brooks, Fleet Exam Development Lead  
I. Forbes, Exam Developer  
P. Eisenmann, Exam Developer

**ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened

NONE

Closed

NONE

Discussed

NONE

**ADAMS DOCUMENTS REFERENCED**

Accession No. ML12299A229 – 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. ML12299A280 – FINAL-Operating Exam