



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

April 3, 2018

Mr. Peter P. Sena, III  
President and Chief Nuclear Officer  
PSEG Nuclear LLC – N09  
P. O. Box 236  
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION – INITIAL OPERATOR  
LICENSING EXAMINATION REPORT 05000354/2018301

Dear Mr. Sena:

On February 21, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Hope Creek. The enclosed examination report documents the examination results, which were discussed on March 20, 2018, with Mr. M. Shaffer, Operations Training Manager, and other members of your staff.

The examination included the evaluation of two applicants for reactor operator licenses, six 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 11. The license examiners determined that eight of 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 March 20, 2018.

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's Public Document Room or from the Publicly Available Records (PARS) component of NRC's Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC website <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

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

Docket No. 50-354  
License No. NPF-57

P. Sena

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Enclosure: Examination Report 05000354/2018301  
w/Attachment: Supplementary Information

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SUBJECT: HOPE CREEK GENERATING STATION – INITIAL OPERATOR  
 LICENSING EXAMINATION REPORT 05000354/2018301 DATED  
 APRIL 3, 2018

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

Docket No. 50-354

License No. NPF-57

Report No. 05000354/2018301

Licensee: PSEG Nuclear LLC

Enterprise Identifier: L-2018-OLL-0017

Facility: Hope Creek

Location: Hancocks Bridge, NJ 08038

Dates: February 12-15, 2018 (Operating Test Administration)  
February 21, 2018 (Written Examination Administration)  
February 27, 2018 (Licensee Submitted Post Exam Package)  
February 16 – March 9, 2018 (NRC Examination Grading)  
March 20, 2018 (Licenses Issued)

Examiners: T. Fish, Chief Examiner, Operations Branch  
B. Fuller, Senior Operations Engineer  
J. DeMarshall, Senior Operations Engineer  
T. Hedigan, Operations Engineer

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

Enclosure

## SUMMARY

ER 05000354/2018301; 2/12-15 and 21/2018; Hope Creek; Initial Operator Licensing Examination Report.

Four NRC examiners evaluated the competency of two applicants for reactor operator licenses, six applicants for instant senior reactor operator licenses, and one applicant for an upgrade senior reactor operator license. The facility developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11.

The written examination was administered by the facility on February 21, 2018. NRC examiners administered the operating tests February 12-15, 2018. The NRC examiners determined that eight of 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 three 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 February 21, 2018, 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 February 27, 2018.

The NRC examination team administered the various portions of the operating examination to all applicants on February 12-15, 2018. The applicants for reactor operator licenses participated in at least two 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 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 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

Eight of nine applicants passed all parts of the operating test and the written examination. For the written examinations, the reactor operator applicants' average score was 84.00 percent and ranged from 80.00 to 88.00 percent, the senior operator applicants' average score was 93.29 percent and ranged from 90.00 to 97.00 percent. The text of the examination questions may be accessed in the 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. Licensee training staff performed this analysis and forwarded it to the chief examiner.

### .3 Initial Licensing Examination Development

#### a. Examination Scope

The facility 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 facility licensee submitted both the written and operating examination outlines on September 6, 2017. 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 December 6, 2017. 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 January 11, 2018. The licensee satisfactorily completed comment resolution on February 2, 2018.

#### b. Findings

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.

#### 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 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. M. Shaffer, Operations Training Manager, and other members of the licensee's staff on March 20, 2018. 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

D. Rein, Exam Author

P. Breidenbach, Exam Author

**ITEMS OPENED, CLOSED, AND DISCUSSED**

NONE.

**ADAMS DOCUMENTS REFERENCED**

Accession No. ML18087A161 – 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 2.5 years.)

Accession No. ML18087A163 – 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 2.5 years.)