



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION I  
2100 RENAISSANCE BLVD., SUITE 100  
KING OF PRUSSIA, PA 19406-2713

April 27, 2015

Mr. Dean Curtland  
Site Vice President  
Seabrook Nuclear Power Plant  
NextEra Energy Seabrook, LLC  
c/o Mr. Michael Ossing  
P.O. Box 300  
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT 1- NRC INITIAL OPERATOR LICENSING  
EXAMINATION REPORT 05000443/2015301

Dear Mr. Curtland:

On March 31, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Seabrook Station, Unit 1. The enclosed examination report documents the examination results, which were discussed on April 16, 2015, with Mr. A. Dodds, Plant General Manager, and other members of your staff.

The examination included the evaluation of four applicants for reactor operator licenses, three 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 9, Supplement 1. The license examiners determined that all of the nine applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses were issued on April 16, 2015.

No findings were identified during this examination. However, a licensee-identified violation, which was determined to be of very low safety significance, is listed in Section 40A7 of this report. The NRC is treating this violation as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance of the violation and because it is entered into your corrective action program. If you contest this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region I, 475 Allendale Road, King of Prussia, PA 19406-1415; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Seabrook Station Unit 1.

D. Curtland

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In accordance with Title 10 of "*Code of Federal Regulations (CFR)*," 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 Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC Web site <http://www.nrc.gov/reading-rm/adams.html#web-based-adams> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

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

Docket No.: 50-443  
License No.: NPF-86

Enclosure:  
Examination Report 05000443/2015301  
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

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## **EXAMINATION REPORT**

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

Docket: 50-443

License: NPF-86

Report: 05000443/2015301

Licensee: NextEra Energy Seabrook, LLC

Facility: Seabrook Station, Unit 1

Location: Seabrook, New Hampshire 03874

Dates: March 23-26, 2015 (Operating Test Administration)  
March 31, 2015 (Written Examination Administration)  
April 3, 2015 (Licensee Submitted Post Exam Package)  
April 13, 2015 (NRC Examination Grading)  
April 16, 2015 (Licenses Issued)

Examiners: D. Silk, Chief Examiner, Operations Branch  
T. Hedigan, Operations Engineer  
C. Lally, Operations Engineer

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

## SUMMARY

ER 05000443/2015301; 3/23-31/2105; Seabrook Station, Unit 1; Initial Operator Licensing Examination Report.

Three NRC examiners evaluated the competency of four applicants for reactor operator licenses; three applicants for instant senior reactor operator licenses; and two applicants for upgrade senior reactor operator licenses at Seabrook Station, Unit 1. 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 March 31, 2015. NRC examiners administered the operating tests on March 23-26, 2015. The NRC examiners determined that all of the nine applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued.

A. NRC-Identified and Self-Revealing Findings

No findings were identified.

B. Licensee-Identified Violations

One violation of very low safety significance or Severity Level IV that was identified by the licensee has been reviewed by the examiners. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and the corrective action tracking number are listed in Section 4OA7 of this report.

## 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 all of the license applications to confirm that they accurately reflected the subject applicant's qualifications. This audit focused on the applicant's experience and control manipulations that provided significant reactivity changes.

###### b. Findings

No findings were identified.

##### .2 Operator Knowledge and Performance

###### a. Examination Scope

On March 31, 2015, the licensee proctored the administration of the written examinations to all nine applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on April 3, 2015.

The NRC examination team administered the various portions of the operating examination to all nine applicants on March 23-26, 2015. The four applicants for reactor operator licenses participated in two dynamic simulator scenarios, in a control room and facilities walkthrough test consisting of eleven system tasks, and an administrative test consisting of four administrative tasks. The three applicants seeking instant senior reactor operator licenses 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 administrative tasks. The two applicants for upgrade senior reactor operator licenses 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.

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b. Findings

All nine of the applicants passed all parts of the operating test and written examinations. For the written examinations, the reactor operator applicants' average score was 93.0 percent and ranged from 92.0 to 94.7 percent, the senior operator applicants' average score was also 93.0 percent and ranged from 90.0 to 97.0 percent. The overall written examination average was 93.0 percent.

The NRC examiners completed the final grading of the written examination on April 10, 2015, and conducted a review of each missed question to determine the accuracy and validity of the examination questions. In accordance with current NRC policy, the release of this written examination 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 five questions that were missed by more than 30 percent of the applicants and submitted the analysis to the chief examiner. The licensee did not submit any post-examination comments regarding this written examination.

.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 written and operating examination outlines were submitted on December 23, 2014. 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 January 22, 2015. The chief examiner reviewed the draft written examination package against the requirements of NUREG-1021 and provided several iterations of comments to the licensee. The written examination comments were resolved on March 23, 2015. The NRC conducted an onsite validation of the operating examinations and provided comments during the week of February 16, 2015. The licensee satisfactorily completed operating test comment resolution on March 9, 2015.

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.

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.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

On February 21, 2015, the licensee informed the chief examiner of the potential for a security breach of the scenarios that were being prepared for the exam. Although the material being stored on the Seabrook simulator computer was password protected, an error in file designation resulted in the ability to bypass the password and access the scenarios. The licensee took immediate action to correct the vulnerability and to ensure exam security.

The licensee interviewed training staff personnel who had access to the simulator files and determined that they had not accessed the exam material. The licensee reviewed the simulator file logs to determine when the exam files had been accessed and subsequently closed. Their system does not record the identification of who accessed the files. However, the licensee was able to establish a correlation between the dates when the files were accessed and when exam developers were present in the training building and working in the simulator on the exam-related files. The licensee concluded that no unauthorized individual(s) accessed the exam files.

The licensee collected and submitted documentation to the NRC which substantiated their conclusion. This documentation includes dates and times when the files were accessed, the exam-related activity that was being performed, sign-offs that individuals (instructors and applicants) did not access the files, and narratives of the licensee's actions addressing this issue. The Region, in conjunction with the Operator Licensing and Training Branch (IOLB) from in the NRC's Division of Inspection and Regional Support in the Office of Nuclear Reactor Regulation, concluded that the licensee appeared to have established that, although there was a security vulnerability, the exam developers were the only ones to have accessed the files and that they had control of

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the exam material on the dates and times that the files were accessed. Therefore, the exam material was permitted to be used on this exam.

The licensee entered this issue into their corrective action program (AR 02027235). This issue was documented as a license identified violation in Section 4OA7 below.

4OA6 Meetings, Including Exit

The chief examiner presented the examination results to Mr. A. Dodds, Plant General Manager, and other members of the licensee's management staff on April 16, 2015. The licensee acknowledged the findings presented.

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

4OA7 Licensee-Identified Violation

The following violation of very low safety significance (Green) or Severity Level IV was identified by the licensee and is a violation of NRC requirements, which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a Non-Cited Violation.

According to 10 CFR 55.49 licensees are required, in part, to "not engage in any activity that compromises the integrity of any application, test, or examination required by this part. The integrity of a test or examination is considered compromised if any activity, regardless of intent, affected, or, but for detection, would have affected the equitable and consistent administration of the test or examination." Contrary to this requirement, on February 21, 2105, the licensee identified a vulnerability in the protection of the NRC exam simulator scenario files that were being stored on the simulator workstation computer. Although the files were password protected, the licensee determined that exam security could be bypassed due to an error in file designation. This issue was entered into the licensee's corrective action program (AR 02027235). This violation is subject to traditional enforcement because of the potential impact upon the regulatory process of issuing licenses to applicants who could have had access to the scenarios prior to the exam administration. This issue meets the criteria for a Severity Level IV violation because it involved a nonwillful compromise of an examination required by 10 CFR Part 55.

Attachments:  
Supplementary Information

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**SUPPLEMENTARY INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

K. Browne, Operations Training Manager  
R. Bryant, Examination Developer  
M. Leone, Operations Training Supervisor-Continuing Training  
E. Lyons, Examination Developer  
E. Pigott, Licensed Operator Initial Training Supervisor

**ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened

NONE

Opened and Closed

NONE

Closed

NONE

Discussed

NONE

**ADAMS DOCUMENTS REFERENCED**

Accession No. ML15098A059 – 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. ML15098A126 – FINAL-Operating Exam