



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

April 16, 2014

Mr. John Dent, Jr.
Site Vice President
Entergy Nuclear Operations, Inc.
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360-5508

SUBJECT: PILGRIM NUCLEAR POWER STATION - NRC INITIAL OPERATOR
LICENSING EXAMINATION REPORT 05000293/2014301

Dear Mr. Dent:

On March 7, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Pilgrim Nuclear Power Station. The enclosed report documents the examination findings, which were discussed on April 1, 2014, with Mr. Steve Verrochi, General Manager Plant Operations, and other members of your staff.

The examination included the evaluation of three applicants for reactor operator licenses, six applicants for instant senior operator licenses, and one applicant for an upgrade senior operator license. 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 10 applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, and the appropriate licenses were issued on April 1, 2014.

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,

/RA/

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

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

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J. Dent

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Docket No.: 05000293

License No.: DPR-35

Enclosure:

NRC Initial Operator Licensing Examination

Report 05000293/2014301

w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

EXAMINATION REPORT

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

Dockets: 50-293

Licenses: DPR-35

Report : 05000293/2014301

Licensee: Entergy Nuclear Operations, Inc.

Facility: Pilgrim Nuclear Power Station

Location: 600 Rocky Hill Road
Plymouth, MA 02360-5508

Dates: Feb 24 - 28, 2014 (Operating Test Administration)
March 7, 2014 (Written Examination Administration)
March 31, 2014 (Licensee Submitted Post Exam Package)
March 31, 2014 (Completion NRC Examination Grading)
April 1, 2014 (Licenses Issued)

Examiners: Joseph M. D'Antonio, Chief Examiner, Operations Branch
Peter Presby, Senior Operations Engineer
Manan Patel, Operations Engineer
Joyce Tomlinson, Operations Engineer

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

SUMMARY OF FINDINGS

ER 05000293/2014301; February 24 - March 31, 2014; Pilgrim Nuclear Power Station, Initial Operator Licensing Examination Report

NRC examiners evaluated the competency of three applicants for reactor operator licenses, six applicants for instant senior operator licenses and one applicant for an upgrade senior operator license at Pilgrim Nuclear Power Station. 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 7, 2014. NRC examiners administered the operating tests on February 24-28, 2014. The license examiners determined that all 10 applicants satisfied the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 55, and the appropriate licenses were issued on April 1, 2014.

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 10 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 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 March 7, 2014, the licensee proctored the administration of the written examinations to all 10 applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the U.S. Nuclear Regulatory Commission (NRC) on March 14, 2014.

The NRC examination team administered the various portions of the operating examination to all 10 applicants on February 24 - 28, 2014. 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 six applicants seeking an instant senior operator license participated in two or 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. The one applicant for an upgrade senior operator license 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 10 of the applicants passed all parts of the examination. For the written examinations, the reactor operator applicants' average score was 87.55 percent and

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ranged from 82.67 to 93.33 percent, the senior operator applicants' average score was 87.43 percent and ranged from 84.00 to 93.00 percent. The overall written examination average was 87.47 percent. The text of the examination questions, the licensee's examination analysis, and the licensee's post-examination comment may be accessed in the Agencywide Documents Access and Management System (ADAMS) 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 2 years.

The NRC examiners completed the final grading of the written examination on March 31, 2014, 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 2 years. The text of the examination questions, the licensee's examination analysis, and the licensee's post-examination comments may be accessed in the ADAMS system under the accession numbers noted in the attachment.

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 all questions that met these criteria and submitted the analysis to the chief examiner.

The licensee submitted one post-examination job performance measure (JPM) comment with the initial post exam submittal on March 14, 2014. The NRC reviewed the facility's submittal package and accepted the facility recommendations to remove one critical step from an Emergency Diesel surveillance JPM. This JPM had as a critical step to unload the emergency diesel generator (EDG) prior to opening the output breaker in response to load oscillations; the requirement to unload was removed as critical. The text of the examination questions, the licensee's examination analysis, and the licensee's post-examination comment with the NRC resolution may be accessed in the ADAMS system under the accession numbers noted in the Attachment 1. In accordance with current NRC policy the release of this written examination will be delayed for 2 years.

.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 December 9, 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 13, 2014. The chief examiner reviewed the draft examination package against the requirements of NUREG-1021, and provided comments to the licensee on the examination. The NRC conducted an onsite validation of the operating examinations and provided further comments during the week of January 26, 2014. The licensee satisfactorily completed comment resolution on prior to the administration of the examination.

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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.

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.

.6 Examination Grading

a. Scope

The examiners reviewed facility grading of the written examination.

b. Findings

The NRC examiners identified two errors in grading of the written examination. The facility regraded the examinations and identified two additional errors. These errors did not affect the pass/fail result for any applicant. This issue has been entered into the facility corrective action process as CR-PNP-2014-01368

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4OA6 Meetings, Including Exit

The chief examiner presented the examination results to Mr. Steve Verrochi, General Manager Plant Operations, and other members of the licensee's management staff on April 1, 2014. The licensee acknowledged the comments presented.

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

Attachments:

1. Supplemental Information
2. Simulator Fidelity Report

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

Steve Verrochi, General Manager Plant Operations
John McDonald, Operations Manager
Charlie McDonald, Training Manager
James Cotter, Superintendent Operations Training
Vince Magnatta, Nuclear Training Instructor
Randy Haislet, Shift Manager Training

NRC Personnel

Max Schneider, Senior Resident Inspector
Joseph D'Antonio, Chief Examiner

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NONE

Opened and Closed

NONE

Closed

NONE

Discussed

NONE

ADAMS DOCUMENTS REFERENCED

Accession No. ML14094A155 – 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. ML14094A157 – FINAL-Operating Exam

Accession No. ML14094A165 – FINAL-Post Exam Comments, Resolutions, and Technical References

ES-501**Simulator Fidelity Report****Attachment 2**Facility Licensee: PilgrimFacility Docket No.: 50-293Operating Test Date: 2/24 - 2/28 2014

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and, without further verification and review in accordance with IP 71111.11, are not indicative of noncompliance with 10 CFR 55.46. No licensee action is required in response to these observations.

While conducting the simulator portion of the operating tests, examiners observed the following items:

Item	Description
1	Simulator core thermal limits calculation generated incorrect numbers during one scenario.
2	Standby Gas Treatment components did not operate correctly during one scenario normal evolution.