



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

December 6, 2011

Mr. David A. Heacock  
President and Chief Nuclear Officer  
Dominion Resources  
5000 Dominion Blvd.  
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION, UNIT 2 - NRC INITIAL OPERATOR  
LICENSING EXAMINATION REPORT 05000336/2011301

Dear Mr. Heacock:

On October 11, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an examination at Millstone Power Station, Unit 2. The enclosed report documents the examination results, which were discussed on November 10, 2011, with Mr. Trad Horner, Training Supervisor, and other members of your staff.

The examination included the evaluation of five applicants for reactor operator licenses and four applicants for instant 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 seven of the 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 November 10, 2011.

No findings were identified during this examination.

One applicant for an instant senior reactor operator license failed the operating portion of the exam and was denied a license. One applicant for a reactor operator license, who passed all portions of the examination, will not be issued a license until he has acquired all of the training and experience for which he was previously granted a waiver.

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

D. Heacock

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Sincerely,

A handwritten signature in black ink, appearing to read "Donald E. Jackson", with a stylized, cursive script.

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

Docket No.: 05000336  
License No.: DPR-65

Enclosure:  
NRC Initial Operator Licensing Examination  
Report 05000336/2011301  
w/Attachment: Supplemental Information

cc w/enclosure: Distribution via ListServ

Agencywide Documents Access and Management System (ADAMS). The 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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**SUNSI Review Complete: DEJ (Reviewer's Initials)**

**ADAMS PKG: ML102850247**

**ADAMS NO.: ML113400183**

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OFFICE	RI/DRS/OB	RI/DRS/OB				
NAME	PPresby/DEJ	DEJackson				
DATE	12/6/2011	12/6/2011				

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**EXAMINATION REPORT**

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

Docket No.: 50-336

License No.: DPR-65

Report No.: 05000336/2011301

Licensee: Dominion Resources

Facility: Millstone Power Station, Unit 2

Location: Rope Ferry Rd Rte 156  
Waterford, CT 06385

Dates: October 3-7, 2011 (Operating Test Administration)  
October 11, 2011 (Written Examination Administration)  
October 24, 2011 (Licensee Submitted Post Exam Package)  
October 12-November 9, 2011 (NRC Examination Grading)  
November 10, 2011 (Licenses Issued)

Examiners: P. Presby, Chief Examiner, Operations Branch  
D. Silk, Senior Operations Engineer  
B. Fuller, Operations Engineer

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

## SUMMARY OF FINDINGS

ER 05000336/2011301; October 3-11, 2011; Millstone Power Station, Unit 2; Initial Operator Licensing Examination Report.

NRC examiners evaluated the competency of five applicants for reactor operator licenses and four applicants for instant senior reactor operator licenses at Millstone 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 11, 2011. NRC examiners administered the operating tests on October 3-7, 2011. The license examiners determined that seven 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

None.

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA5 Other Activities (Initial Operator License Examination)

##### .1 License Applications

###### a. Scope

The examiners reviewed all nine 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 two 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 October 11, 2011, 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 October 24, 2011.

The NRC examination team administered the operating examination to all nine applicants from October 3-7, 2011. Three of the five applicants for reactor operator licenses participated in three dynamic simulator scenarios and the other two of five applicants for reactor operator licenses participated in two dynamic scenarios. All five applicants for reactor operator licenses participated in a control room and facilities walkthrough test consisting of 11 system tasks, and an administrative test consisting of four administrative tasks. The four applicants 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 administrative tasks.

###### b. Findings

Eight of the nine applicants passed all parts of the operating test. One instant senior reactor operator applicant failed the walkthrough portion of his operating test. All applicants passed the written examinations. For the written examinations, the reactor

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operator applicants' average score was 84.27 percent and ranged from 80.00 to 88.00 percent, the senior reactor operator applicants' average score was 87.50 percent and ranged from 80.00 to 95.00 percent. The overall written examination average was 85.70 percent.

The NRC examiners completed the final grading of the written examination on November 9, 2011, 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 eight questions that met these criteria and submitted the analysis to the chief examiner.

The licensee submitted one post-examination question comment on October 24, 2011. The NRC reviewed the facility's post-exam comment submittal package and accepted the facility recommendation on the submitted question. The key answer was changed on Question #61 to accept Choice D as a second correct answer, in addition to the original key answer of Choice B. The text of the examination questions and the licensee's post-examination comment with the NRC resolution 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 will be delayed for two 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 20, 2010. 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 February 5, 2011. The chief examiner reviewed the draft examination package against the requirements of NUREG-1021, and provided comments to the licensee on the examination on March 7, 2011. The NRC conducted an onsite validation of the operating examinations and provided further comments during the week of September 6, 2011. The licensee satisfactorily completed operating test comment resolution on September 22, 2011, and written exam comment resolution on October 7, 2011.

#### 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 reactor operator written examination and the operating examinations initially submitted by the licensee were within the range of

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acceptability expected for a proposed examination. However, the senior reactor operator written examination initially submitted by the licensee was outside the range of acceptability expected for a proposed examination, with 72 percent (18 of 25) unsatisfactory questions. Many of the unsatisfactory questions required rewrite or replacement to make the questions SRO-only and/or to provide plausible distractors. Future examination submittals should incorporate any lessons learned from this effort.

.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.

4OA6 Meetings, Including Exit

The chief examiner presented the examination results to Mr. Trad Horner, Training Supervisor, and other members of the licensee's management staff on November 10, 2011. The licensee acknowledged the findings presented.

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

Attachment:

1. Supplemental Information

Enclosure

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

**Licensee Personnel**

L. Armstrong, Training Manager  
W. Chestnut, Assistant Operations Manager  
T. Horner, Training Supervisor  
R. Cimmino, Exam Developer  
R. Ashey, Exam Developer

**ITEMS OPENED, CLOSED, AND DISCUSSED**

NONE

**ADAMS DOCUMENTS REFERENCED**

Accession No. ML113340071 – 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. ML113340098 – FINAL-Operating Exam

Accession No. ML113400006– FINAL-Post Exam Comments, Resolutions, and Technical References