August 20, 2004

Mr. David A. Christian
Sr. Vice President and Chief Nuclear Officer
Dominion Resources
5000 Dominion Boulevard
Glen Allen, VA 23060-6711

SUBJECT: MILLSTONE POWER STATION UNIT 3 - REACTOR OPERATOR AND SENIOR REACTOR OPERATOR INITIAL EXAMINATION REPORT 05000423/2004301

Dear Mr. Christian:

This report transmits the results of the Reactor Operator (RO) and Senior Reactor Operator (SRO) licensing examination conducted by the NRC during the period of July 16 - 23, 2004. This examination addressed areas important to public health and safety and was developed and administered using the guidelines of the “Examination Standards for Power Reactors” (NUREG-1021, draft Revision 9).

Based on the results of the examination, all three Senior Reactor Operator and all six of the Reactor Operator applicants passed all portions of the examination. The nine applicants included six ROs, and three instant SROs. The results indicated that the applicants were generally well prepared for the examination. Mr. John G. Caruso discussed performance insights observed during the examination with Messrs. Jim Grogan and Trad Horner of your staff on July 23, 2004. On July 29, 2004, final examination results, including individual license numbers, were given during a telephone call between Mr. John G. Caruso and Mr. Mike Wilson of your staff.

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 (ADAMS). These records include the final examination and are available in ADAMS (Master File - Accession Number ML033450424; RO and SRO Written - Accession Number ML042190268; RO and SRO Operating Section A - Accession Number ML042190271; RO and SRO Operating Section B - Accession Number ML042190301; and RO and SRO Operating Section C - Accession Number ML042190312), ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions regarding this examination, please contact me at (610) 337-5183, or by E-mail at RJC@NRC.GOV .

Sincerely,

/RA/

Richard J. Conte, Chief
Operational Safety Branch
Division of Reactor Safety

Docket No. 50-423
License No. NPF-49

Enclosure: Initial Examination Report No. 05000423/2004301

cc w/encl:
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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-423
License No:	NPF-49
Report No:	05000423/2004301
Licensee:	Dominion Nuclear Connecticut, Inc.
Facility:	Millstone Power Station, Unit 3
Location:	P. O. Box 128 Waterford, CT 06385
Dates:	July 16, 2004 (Written Examination Administration) July 19-23, 2004 (Operating Test Administration) July 23, 2004 (Licensee Grading of Written) July 26 -29, 2004 (NRC Examination Grading)
Examiners:	John G. Caruso, Senior Operations Engineer (Chief Examiner) Don Jackson, Operations Engineer Gil Johnson, Operations Engineer Harry Balian, Operations Engineer (under instruction for provisional examiner certification)
Approved by:	Richard J. Conte, Chief Operational Safety Branch Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000423/2004301; July 16-23, 2004; Millstone Power Station, Unit 3; Initial Operator Licensing Examination. Nine of nine applicants passed the examination (six reactor operators, three SRO instants).

The written examinations were administered by the facility and the operating tests were administered by four NRC region-based examiners (one under instruction for provisional examiner certification). There were no inspection findings of significance associated with the examinations.

A. NRC-Identified and Self-Revealing Findings

None

B. Licensee-Identified Violations

None

Report Details

1. REACTOR SAFETY

Mitigating Systems - Reactor Operator (RO) and Senior Reactor Operator (SRO) Initial License Examination

a. Scope of Review

The licensee developed the written examinations and the NRC examination team developed the operating initial examination, and together with Site training and operations personnel verified or ensured, as applicable, the following:

- The examination was prepared and developed in accordance with the guidelines of draft Revision 9 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." A review was conducted both in the Region I office and at the plant and training facility. Final resolution of comments and incorporation of test revisions were conducted during and following the onsite preparation week.

- Simulation facility operation was proper with the exception of three potential fidelity issues.

- A test item analysis was completed on the written examination for feedback into the systems approach to training program.

- Examination security requirements were met.

The NRC examiners administered the operating portion of the examination to all applicants from July 19-23, 2004. The written examination was previously administered by the Site training staff on July 16, 2004.

b. Findings

Grading and Results

All nine applicants (three SROs and six ROs) passed all portions of the initial licensing examination.

The facility had no post-examination comments.

Examination Administration and Performance

1. Simulator Fidelity Issues

During the exam administration there were three potential simulator fidelity issues identified.

a. Modeling of Safety Injection Pump Cavitation - During the loss of cold leg recirculation JPM, after the Containment Recirculation Spray System (RSS) pumps were secured Safety Injection (SI) and Charging (CHS) pumps continued to cavitate. However, when the CHS pumps were subsequently secured indications of SI pump cavitation went away even though the SI pumps had no suction source.

b. Fouled Reactor Plant Component Cooling Water Heat Exchanger - During the "Fouled Reactor Plant Component Cooling Water (RPCCW) Heat Exchanger" JPM, one Applicant indicated that he recognized a potential heat exchanger problem but he ruled out fouling on the Service Water side because Service Water flowrate was unchanged between heat exchanger "B" and "C".

c. Volume Control Tank Temperature following Loss of RPCCW Train "A" - During exam validation week, the exam team noted a rapid rise of Volume Control Tank (VCT) temperature following a loss of RPCCW Train "A" cooling to the letdown Non-Regenerative Heat Exchanger (NRHX). This response may be inaccurate.

In order to obtain additional information and evaluate it to ensure compliance with 10 CFR 55.46, these issues will be unresolved. More specifically, based on input for the facility, the NRC review should determine: if these were true fidelity issues; and if so, could these have been detected sooner through the testing process or operator feedback. **URI 05000423/2004301-01, Simulator Fidelity Issues**

2. During the exam out brief meeting on July 23, 2004, the Chief Examiner shared thirteen potential procedure enhancement areas that, in some cases, caused confusion to the applicants during the operating exam administration. The licensee subsequently reported that these procedural issues had been captured in the Millstone Unit 3 corrective action program (CR-04-07003, 07068, and 07152).

3. During the telephone exit meeting held on July 29, 2004, the Chief Examiner discussed exam team observations made during operating exam administration that pointed to possible applicant knowledge and abilities weaknesses. The areas of weakness were highlighted for possible remediation training and for possible additional emphasis during future initial license classes (see below).

a. Diverse Responses to Loss of Cold Leg Recirculation - During a JPM that involved Loss of Cold Leg Recirculation, four applicants (i.e., one SRO and three ROs) did not satisfactorily respond to the Loss of Cold Leg Recirculation caused by a clogged containment sump. In addition, several RO applicants had difficulty finding ECA-1.1 in the Simulator Control Room.

b. Manual Steam Generator Water Level Control - During one operating scenario, three crews were unable to maintain Steam Generator Water level at the appropriate level. One crew lost control during a failed Steam Generator level instrument malfunction. The remaining two crews lost control during a subsequent loss of vital AC buss VIAC-1. All three crews subsequently responded to place the plant in a safe, stable condition.

c. Improper Tripping of an EDG - Two Reactor Operator Applicants failed to properly trip an Emergency Diesel Generator (EDG) following a generator overload malfunction. Both Applicants opened the output breaker but did not push the emergency stop pushbuttons. Pushing the emergency stop pushbuttons is required per OP 3346A, Precaution 3.19, to de-energize the generator exciter.

d. Throttle Valves - Four RO Applicants did not immediately recognize that 3MSS*MOV18A/B/C/D are throttle valves. Two of these Applicants never recognized this and ultimately failed the JPM.

e. AOPs Not Entered When Entry Conditions Met - Three out of three SRO Applicants did not enter AOP-3560, Loss of Service Water, even though the plant had met the entry conditions. All three acknowledged this during post examination questioning and indicated that they had been trained to respond per the applicable alarm response because the alarm response restored Service Water quicker. The exam team determined that the SRO applicants should have announced an AOP entry condition, since AOPs take precedence over alarm response procedures in the hierarchy of procedures. However, in this case, the exam team acknowledged that the alarm response did provide equivalent guidance.

f. AOPs Not Entered When Entry Conditions Met - During administration of a JPM involving a dropped rod, three out six Reactor Operator Applicants did not go to AOP 3552 in response to the dropped control rod. The error is partly attributable to a note in SP 3602A, Rod Cluster Control Exercise. However, this is also an example of not entering AOPs when the entry conditions have been met.

g. Simulator Crew Performance - There were two instances where the "crew" did not understand the relationship of reactor coolant pump (RCP) trip to S/G pressures. They thought they had a tube rupture when the steam pressure in the affected loop was significantly higher than the other three.

4OA6 Exit Meeting Summary

On July 29, 2004 the NRC provided conclusions and examination results to Site management representatives via telephone. License numbers for eight of nine applicants were also provided during this time. The license number for the one

remaining applicant was withheld pending completion of his required (non licensed operator experience). Mr. Mike Wilson was informed that when the NRC is notified, in writing, that this experience has been completed by this individual, his license will be issued.

The NRC expressed appreciation for the cooperation and assistance that was provided during the preparation and administration of the examination by the licensee's training staff.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

M. Wilson	Manager, Nuclear Training
T. Horner	Supervisor, Operator Training
B. Royce	Operations Instructor/ Exam Developer
B. Pinkowitz	Operations Instructor/ Exam Developer

NRC Personnel

J. Caruso	Senior Operations Engineer
H. Balian	Operations Engineer
D. Jackson	Operations Engineer
G. Johnson	Operations Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000423/2004301-01	URI	Potential Simulator Fidelity Issues