

January 30, 2003

Mr. J. Alan Price  
Site Vice President - Millstone  
c/o Mr. David. W. Dodson  
Acting Manager, Licensing  
Dominion Nuclear Connecticut, Inc.  
Rope Ferry Road  
Waterford, CT 06385

SUBJECT: MILLSTONE NUCLEAR POWER STATION, UNIT 2 REACTOR OPERATOR  
AND SENIOR REACTOR OPERATOR INITIAL EXAMINATION REPORT  
NO. 50-336/03-301

Dear Mr. Price:

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 December 16-20, 2002. 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, Revision 8, Supplement 1).

Based on the results of the examination, all twelve applicants passed all portions of the examination. The applicants included seven RO's, and five instant SRO's. Examination results indicated that the applicants were well prepared for the examination. Mr. John Caruso discussed performance insights observed during the examination with Mr. Joseph Bergin on December 20, 2002. On January 9, 2003, final examination results, including individual license numbers, were given during a telephone call between Mr. John Caruso and Mr. Trad Horner.

In accordance with 10 CFR 2.790 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 (RO and SRO Written - Accession Number ML030070508; RO and SRO Operating Section A - Accession Number ML030070583; RO and SRO Operating Section B - Accession Number ML030070601; and RO and SRO Operating Section C- Accession Number ML030070351) also, Licensee Post Written Examination Comments Accession ML030070641. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/ADAMS.html> (the Public Electronic Reading Room).

Mr. J. Alan Price

2

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. 50-336  
License No. DPR-65

Enclosure: Initial Examination Report No. 50-336/03-301

cc w/encl:

D. A. Christian, Senior Vice President - Nuclear Operations and Chief Nuclear Officer  
W. R. Matthews, Senior Vice President - Nuclear Operations  
Mr. J.A. Price, Site Vice President - Millstone  
S. E. Scace, Assistant to the Site Vice President  
G. D. Hicks, Director, Nuclear Station Safety and Licensing  
A. J. Jordan, Jr., Director - Nuclear Engineering  
S. P. Sarver, Director, Nuclear Station Operations and Maintenance  
D. A. Smith, Manager, Licensing  
P. J. Parulis, Manager, Nuclear Oversight  
M. J. Wilson, Manager - Nuclear Training  
L. M. Cuoco, Senior Counsel  
V. Juliano, Waterford Library  
S. Comley, We The People  
J. Buckingham, Department of Public Utility Control  
E. Wilds, Director, State of Connecticut SLO Designee  
First Selectmen, Town of Waterford  
D. Katz, Citizens Awareness Network (CAN)  
R. Bassilakis, CAN  
J. M. Block, Attorney, CAN  
J. Besade, Fish Unlimited  
G. Winslow, Citizens Regulatory Commission (CRC)  
J. Markowicz, Co-Chair, NEAC  
E. Woollacott, Co-Chair, NEAC  
R. Shadis, New England Coalition Staff  
W. Meinert, Massachusetts Municipal Wholesale Electric Company  
C. Brinkman, Manager, Washington Nuclear Operations

Mr. J. Alan Price

3

**Distribution w/encl: (VIA E-MAIL)**

Region I Docket Room (with concurrences)

S. M. Schneider, SRI - Millstone Unit 2

A. Cerne, SRI - Millstone Unit 3

H. Miller, ORA

J. Wiggins, ORA

B. McDermott, RI

K. Jenison, RI

D. Screnci, PAO

T. Madden, OCA

H. Nieh, OEDO

J. Clifford, NRR

R. Ennis, PM, NRR

G. Wunder, Backup PM, NRR

V. Nerses, PM, NRR

T. Byron, INPO ([byrontr@inpo.org](mailto:byrontr@inpo.org))

W. Lanning, DRS

R. Crlenjak, DRS

R. Conte, DRS

J. Caruso, Chief Examiner, DRS

C. Buracker, DRS (Master Exam File)

DRS Files

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML030300721.wpd **ADAMS PKG: ML021060060**

After declaring this document "An Official Agency Record" it **will** be released to the Public.

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RI/DRS		RI/DRS		RI/DRS		RI/DRS		
NAME	CBuracker		JCaruso		BMcDermott		RJConte		
DATE	01/29/03		01/29/03		01/30/03		01/29/03		

OFFICIAL RECORD COPY

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No: 50-336

License No: DPR-65

Report No: 50-336/03-301

Licensee: Dominion Nuclear Connecticut, Inc.

Facility: Millstone Nuclear Power Station Unit 2

Dates: October 25, 2002 (Written Examination Administration)  
December 16-20, 2002 (Operating Test Administration)  
December 23, 2002 - January 6, 2003 (Examination Grading)

Examiners: John Caruso, Senior Operations Engineer (Chief Examiner)  
Joseph D'Antonio, Operations Engineer  
David Silk, Senior Operations Engineer

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

## SUMMARY OF FINDINGS

IR 05000336/03-301; on December 16-20, 2002; Millstone Nuclear Power Station, Unit 2, Initial Operator Licensing Examination was administered. Twelve of twelve applicants passed the examination.

The written examinations were administered by the facility and the operating tests were administered by three NRC region-based examiners. There were no inspection findings of significance associated with the examinations.

## Report Details

### **1. REACTOR SAFETY**

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

##### **a. Scope of Review**

The NRC examination team reviewed the written and operating examinations and post exam materials submitted by the Millstone Unit 3 training staff to verify or ensure, as applicable, the following:

- The examinations were developed in accordance with the guidelines of Revision 8 of NUREG-1021, Supplement 1, "Operator Licensing Examination Standards for Power Reactors" and they met the overall quality goals (range of acceptability) of these standards. The review was conducted both in the Region I office and at the Millstone training facility. Final resolution of comments and incorporation of test revisions were made during and following the onsite preparation week.
- Simulation facility operation was proper.
- 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 December 16-20, 2002. The written examination was previously administered by the Millstone Nuclear Power Station Unit 2 training staff on October 25, 2002.

##### **b. Observations**

#### Grading and Results

All five SRO applicants and all seven RO applicants passed all portions of the initial licensing examination.

There were two post-written examination comments that were submitted by the licensee. The NRC's resolution of these comments is addressed in Attachment 1.

#### Examination Preparation and Quality

The exams were within the acceptable range of the guidelines.

### Examination Administration and Performance

An apparent generic applicant weakness was identified during the NRC's administration of a JPM Task in the simulator, "A" DG Operability Test (Alternate Path). Five of twelve applicants demonstrated a weakness in acknowledgment and use of the alarm response procedures. In particular, Annunciator D-34, Differential Lockout DG 12U, annunciated after the applicants had raised load approximately 500 kW. Two of applicants disregarded the alarm altogether and three other applicants referred to it after continuing to raise load on the machine but subsequently refereed to the alarm response procedure and completed the task. The applicants either did not recognize or were late in recognizing that this annunciator represented a degraded equipment condition that should have resulted in an automatic trip of the machine. No emergency condition existed to justify possibly damaging critical plant equipment by continuing operation.

A second apparent generic applicant weakness was identified in that three of the five SRO applicants mis-classified an intermediate event classification which was part of an administrative JPM Task, "Event Classification and Protective Action Recommendations".

#### 4OA6 Exit Meeting Summary

On January 9, 2003, the NRC provided conclusions and results for the written and operating portions of the examinations to the Millstone Nuclear Power Station, Unit 2 management representatives via telephone. License numbers for all twelve applicants that had passed all portions of the initial licensing examination were also provided during this time.

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.

## KEY POINTS OF CONTACT

LICENSEE

Mike Wilson	Manager, Operator Training
Trad Horner	Supervisor, Nuclear Operator Training
Kevin Dingle	Supervisor, Unit 2 Initial Operator Training
Rich Spurr	Unit 2 Senior Instructor/Exam Developer
Richard Ashley	Unit 2 Senior Instructor/Exam Developer
Joe Bergin	Unit 2 LORT Supervisor

NRC

John Caruso	Senior Operations Engineer
Joseph D'Antonio	Operations Engineer
David Silk	Senior Operations Engineer

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>ITEM NUMBER</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
NONE		



## ATTACHMENT 1

### NRC RESOLUTION OF LICENSEE COMMENTS

Licensee's Post Written Examination Comments Publically Available  
in ADAMS Accession No. ML030070641

Question: SRO 54

Comment: The question is testing the understanding and application of technical specifications assuming the "A" Emergency Diesel Generator (EDG) is out of service for maintenance and the "D" Containment Air Recirculation Cooling Fan ("D" CAR) fails surveillance testing. The question is recommended for deletion since none of the answer choices were correct in specifying what MUST be done. Two of the answers, (B & C), placed the unit in the MODE which would comply with Technical Specifications, however it isn't clearly specified in either answer that the Pressurizer pressure requirement would be met within the specified time. Additionally, each of these answers went on to place the unit in a more restrictive MODE than necessary, (HOT SHUTDOWN).

NRC Resolution: Recommendation accepted. The question is deleted due to no correct answer. With the Facility 1 ("A" EDG) Emergency power supply out of service, the Facility 1 Containment Cooling Train ("A & C CAR Cooling units) and the Facility 1 Containment Spray Train must be considered inoperable under the requirements of TS 3.0.5. In addition, the Facility 2 Containment Cooling Train becomes Inoperable due to the "D" CAR fan failing its surveillance. The fact that the Facility 1 Containment Spray pump must also be considered Inoperable makes answer choice "D" incorrect. Technical Specification 3.0.5 allows 2 hours to restore the inoperable power supply or the inoperable equipment. Failing this, the Tech Spec requires that ACTION be initiated to place the unit in a MODE in which the applicable LCO does not apply by placing it, as applicable, in at least HOT STANDBY within the next 6 hours. Technical Specification 3.6.2.1 Containment Spray and Cooling Systems is the applicable LCO. This Tech Spec is applicable in MODES 1, 2 and 3\*. Consequently, placing the unit in HOT STANDBY and decreasing Pressurizer pressure below 1750 psia would comply with the requirements of TS 3.0.5 since LCO 3.6.2.1 would no longer apply. Note: The CAR fans are electrically interlocked not to operate in fast speed during an accident to prevent overloading the diesels and that is why the surveillance testing and operability is based on slow speed operation.

Question: RO 73, SRO 73

Comment: The question asks the applicant to select a voltage and amperage combination that would not exceed the 3 MVA limit procedurally specified for the cross-tie evolution. There were two possible answers that provided voltage and amperage combination that wouldn't exceed the 3 MVA limit using EOP 2541, Attachment 23U. The recommendation is to change the correct answer to the question from "A" to "C". Selection A was based on an incorrect interpretation of information that came from the FSAR. Interpreted correctly, the FSAR states that the crosstie can provide adequate power. Analysis has indicated that the ampacity limit of the cables is 525.9 amps equated to a nominal 3.79 MVA and with load limits and other margins considered the decision was made to retain the 3 MVA limit to prevent overheating by exceeding the ampacity of the cables between 24E and 24C or 24D.

NRC Resolution: Recommendation accepted. The answer to the question is changed from "A" to "C". Answer "A" was based on an incorrect interpretation of information that came from the FSAR. In CR#M2-00-2204, initiated August 03, 2000, the explanation for retaining the 3MVA limit is explained. CR-02-1250 was generated on November 20, 2002 to ensure the Caution in procedure AOP 2502C, "Millstone Unit 2 Loss of Vital 4.16 kV Bus 24 C" is revised to clearly state the 3 MVA limit provides protection from overheating due to exceeding ampacity. In addition, on October 31, 2002 the licensee's staff (electrical engineer and engineering manager) reviewed and concurred with the response and recommendation that "C" is the only correct answer to this question.