



Northeast  
Utilities System

107 Selden Street, Berlin, CT 06037

Northeast Utilities Service Company  
P.O. Box 270  
Hartford, CT 06141-0270  
(203) 665-5000

April 20, 1994

Docket No. 50-336  
B14826

Re: 10CFR50.90  
10CFR50.91

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Millstone Nuclear Power Station, Unit No. 2  
Proposed Revision to Technical Specifications  
Carbon Sample Testing

Purpose

The purpose of this letter is to respond to requests made by the NRC Staff in teleconferences conducted on April 15, 18, and 19, 1994, between the NRC Staff and Northeast Nuclear Energy Company (NNECO) representatives. The teleconferences concerned a NNECO submittal dated April 14, 1994,<sup>(1)</sup> which requested that the NRC Staff process a Millstone Unit No. 2 license amendment request on an emergency basis, and alternatively requested that the NRC Staff exercise enforcement discretion while the license amendment request is processed.

Additionally, NNECO is proposing to correct two administrative errors on Pages 3/4 6-26 and 3/4 9-17 of the Millstone Unit No. 2 Technical Specifications.

Summary

On April 15, 1994, the NRC Staff:

- Granted enforcement discretion associated with Millstone Unit No. 2 Limiting Conditions for Operation (LCO) 3.6.5.1 and 3.7.6.1;
- Requested that NNECO provide additional information concerning the events that transpired prior to the establishment of the need for an emergency license amendment request;

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(1) J. F. Opeka letter to the U.S. Nuclear Regulatory Commission, "Millstone Nuclear Power Station, Unit No. 2, Proposed Revision to Technical Specifications, Carbon Sample Testing," dated April 14, 1994.

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- Requested that NNECO revise the proposed changes to the Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.7.6.1.c.2, 4.7.6.1.d, 4.9.15.b.2, and 4.9.15.c by specifying in the applicable footnotes the laboratory test conditions (i.e., temperature, relative humidity, and allowable penetration percentage); and
- Recommended that NNECO test the applicable charcoal medium in accordance with the requirements of American Society for Testing and Materials (ASTM) D3803-89 prior to the approval of the proposed license amendment.

This submittal provides responses to the NRC requests and recommendations. It includes revisions to the changes proposed to the Millstone Unit No. 2 Technical Specifications in a submittal dated April 14, 1994. Additionally, NNECO is proposing to include a statement in Bases Sections 3/4.6.5.1 and 3/4.9.15 to provide the rationale for a removal efficiency acceptance criterion, and to correct two administrative errors on Pages 3/4 6-26 and 3/4 9-17 of the Millstone Unit No. 2 Technical Specifications.

NNECO believes that these revisions do not alter the conclusions of the submittal dated April 14, 1994. The proposed changes do not pose a condition adverse to safety, do not involve an SHC, and do not involve any irreversible environmental consequences.

#### Background

During a review of the recently scheduled ventilation system testing, the Quality and Assessment Services Department discovered a discrepancy in the references identified in the vendor test procedure compared to the Millstone Unit No. 2 Technical Specification requirements.

A comparison of the testing methods used by the vendor versus the Millstone Unit No. 2 Technical Specification requirements was performed. The vendor revised its procedure to reflect the correct references. The vendor completed the in-place portion of the testing, on the referenced ventilation systems, in accordance with the current Millstone Unit No. 2 Technical Specification requirements.

On April 12, 1994, it was discovered that the vendor's test equipment could not support the laboratory test required by the older testing standard currently referenced in the Millstone Unit No. 2 Technical Specifications.

The charcoal test canister portion of the surveillance is performed in the vendor's laboratory. During the vendor's review to ensure compliance with the older standards, the vendor identified a

problem with the charcoal test canister testing method. The vendor stated that the charcoal canisters should not be tested in accordance with the requirements specified in the Technical Specifications because:

- 1) The test produces a high failure rate which occurs when the filter bed becomes wet as a result of the required drastic time/temperature/relative humidity change, and
- 2) The NRC has recommended that utilities test charcoal in accordance with ASTM Standard D3803-89 because this standard is the more technically correct test standard.

As discussed below, the in-place charcoal for the "B" facilities of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems were tested in 1993 to meet the requirements of Technical Specifications 4.7.6.1.c.2 and 4.6.5.1.c, respectively. These surveillances were performed utilizing a standard (ASTM Standard D3803-79/86) different than that specified in the Millstone Unit No. 2 Technical Specifications (American National Standards Institute (ANSI) N509-1976). Therefore, these tests were not conducted in strict compliance with the Millstone Unit No. 2 Technical Specifications. Even though the testing performed on the charcoal canisters in 1993 was technically correct and ensured that both filter systems could perform their required safety function, the in-place charcoal for the "B" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems was conservatively determined to be inoperable at 1715 hours on April 12, 1994.

In a submittal dated April 14, 1994, NNECO proposed to amend Operating License, DPR-65, by revising Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.7.6.1.c.2, 4.7.6.1.d, 4.9.15.b.2, and 4.9.15.c to permit carbon samples to be tested in accordance with ASTM D3803-89 versus ANSI N509-1976. NNECO requested that the NRC Staff process the license amendment request on an emergency basis pursuant to 10CFR50.91(a)(5), since Millstone Unit No. 2 is operating under the Action Statements for Limiting Conditions for Operation (LCO) 3.6.5.1 and 3.7.6.1. These Action Statements require the affected systems to be restored to an operable status within seven days, or the plant be placed in at least hot standby within the next six hours and in cold shutdown in the following 30 hours. The allowed outage times were due to expire on April 19, 1994. Therefore, NNECO requested that the license amendment be approved prior to April 19, 1994.

Alternatively, NNECO requested that the NRC Staff exercise enforcement discretion associated with LCOs 3.6.5.1 and 3.7.6.1 to be effective until the license amendment is issued. The enforcement discretion was requested to permit NNECO to maintain

Millstone Unit No. 2 at steady-state operation while the proposed license amendment is processed.

NNECO's requests were discussed during a teleconference on April 15, 1994, between the NRC Staff and NNECO representatives. During this teleconference, the NRC Staff:

- Granted NNECO's request for enforcement discretion associated with LCOs 3.6.5.1 and 3.7.6.1;
- Requested additional information concerning the events that transpired prior to the establishment of the need for an emergency license amendment request;
- Requested that NNECO revise the proposed changes to the Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.7.6.1.c.2, 4.7.6.1.d, 4.9.15.b.2, and 4.9.15.c by specifying in the applicable footnotes the laboratory test conditions (i.e., temperature, relative humidity, and allowable penetration percentage); and
- Recommended that NNECO test the applicable charcoal medium in accordance with the requirements of ASTM D3803-89 prior to the approval of the proposed license amendment.

#### Discussion

NRC Request (1) - Additional Information Concerning Events that Transpired Prior to the Establishment of the Need for an Emergency License Amendment Request

In addition to the discussion provided above, the following information is offered:

The in-place charcoal for the "B" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems was installed on February 11, 1988, and July 31, 1992, respectively. Also, in February 1993, there was a partial change of the in-place charcoal for the "B" facility of the Control Room Emergency Ventilation System. The in-place charcoal for the "B" facility of the Enclosure Building Filtration System was tested on March 18, 1993, to comply with the requirement of Millstone Unit No. 2 Technical Specification 4.6.5.1.c. The in-place charcoal for the "B" facility of the Control Room Emergency Ventilation System was tested on January 18, 1993, to comply with the requirement of Millstone Unit No. 2 Technical Specification 4.7.6.1.c.2. Based on these test dates, the next 18-month surveillances for the "B" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems would be due on December 2, 1994, and

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February 2, 1995, respectively. These dates include the 25% grace period permitted by the Millstone Unit No. 2 Technical Specifications.

The in-place charcoal for the "A" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems was installed on November 20, 1992, and November 13, 1992, respectively. Based on these installation dates, the 18-month surveillances for the in-place charcoal for the "A" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems would be due October 5, 1994, and September 28, 1994, respectively. These dates include the 25% grace period permitted by the Millstone Unit No. 2 Technical Specifications. Thus, no testing of the currently installed charcoal for the "A" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems had been performed.

As discussed above, the in-place charcoal for the "B" facilities of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems were tested in 1993 to meet the requirements of Technical Specifications 4.7.6.1.c.2 and 4.6.5.1.c, respectively. These surveillances were performed utilizing a standard (ASTM Standard D3803-79/86) different than that specified in the Millstone Unit No. 2 Technical Specifications (ANSI N509-1976). Therefore, these tests were not conducted in strict compliance with the Millstone Unit No. 2 Technical Specifications. Even though the testing performed on the charcoal canisters in 1993 was technically correct and ensured that both filter systems could perform their required safety function, the in-place charcoal for the "B" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems was conservatively determined to be inoperable at 1715 hours on April 12, 1994.

Since the charcoal medium surveillance requirements for the "A" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems were satisfied because no canister surveillance had been performed on the filters since filter changeout, the "A" facility of the Control Room Emergency Ventilation and Enclosure Building Filtration Systems are considered operable.

NRC Request (2) - Revise the Proposed Changes to Millstone Unit No. 2 Technical Specifications Submitted on April 14, 1994

On April 14, 1994, NNECO proposed to revise Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.7.6.1.c.2, 4.7.6.1.d, 4.9.15.b.2, and 4.9.15.c to permit carbon samples to be tested in accordance with ASTM Standard D3803-89 versus ANSI N509-1976. Specifically, NNECO proposed to add the following footnote



to Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.7.6.1.c.2, 4.7.6.1.d, 4.9.15.b.2, and 4.9.15.c:

"ASTM D3803-89 shall be used in place of ANSI N509-1976 as referenced in table 2 of Regulatory Guide 1.52."

On April 15, 1994, the NRC Staff requested that NNECO revise this footnote to include a reference to the specific temperature (30°C), relative humidity (70% or 95% relative humidity dependent upon whether a system has safety grade heaters), and allowable penetration (1%). NNECO has reviewed ASTM Standard D3803-89 and finds the addition of specific temperature and relative humidity requirements acceptable, since these parameters pertain to testing conditions of the improved test method.

In lieu of incorporating a requirement for an allowable penetration of 1%, NNECO is proposing to add an additional statement to the applicable footnotes for Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.9.15.b.2 and 4.9.15.c. The additional statement will require that the charcoal samples have a removal efficiency of greater than or equal to 95%. A removal efficiency acceptance criterion of greater than or equal to 95% is more conservative than the value assumed in the accident analyses described in the Millstone Unit No. 2 Final Safety Analysis Report of 90%. It will ensure that the charcoal for the Enclosure Building Filtration and Spent Fuel Pool Area Ventilation Systems will have the capability to perform their intended safety function throughout an operating cycle. This proposal was discussed in a teleconference between the NRC Staff and NNECO representatives conducted on April 19, 1994. It was determined to be mutually acceptable.

Sections 6.7.3.1 and 14.8.3.5 and Table 14.7.4-1 of the Millstone Unit No. 2 Final Safety Analysis Report (FSAR) state that the charcoal efficiency for the Enclosure Building Filtration System is assumed to be 90% in the Millstone Unit No. 2 accident analyses. Additionally, Sections 15.3.1, 15.3.2, and 15.3.3 of the original Safety Evaluation for Millstone Unit No. 2<sup>(2)</sup> state that the efficiency of the charcoal filters for the Enclosure Building Filtration System is assumed to be 90%.

The required efficiency for the charcoal filters in the Control Room Emergency Ventilation System is stated in Millstone Unit No. 2 Technical Specification 4.7.6.1.c.2. It states that the carbon sample shall have a removal efficiency of greater than or equal to

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(2) O. D. Parr letter to D. C. Switzer transmitting the original Safety Evaluation concerning Millstone Unit No. 2's application for an operating license, dated May 10, 1974.

95% for the in-place charcoal for the Control Room Emergency Ventilation System. The removal efficiency was increased to 95% in Amendment No. 100 to the Millstone Unit No. 2 Operating License.<sup>(3)</sup> This change was in response to NUREG-0737.<sup>(4)</sup>

In response to the NRC Staff's request and the above discussion, NNECO is proposing to replace the previously proposed footnote (noted above) with the following:

For Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.9.15.b.2 and 4.9.15.c

"ASTM D3803-89 shall be used in place of ANSI N509-1976 as referenced in table 2 of Regulatory Guide 1.52. The laboratory test of charcoal should be conducted at a temperature of 30°C and a relative humidity of 95% within the tolerances specified by ASTM D3803-89. The charcoal sample shall have a removal efficiency of  $\geq 95\%$ ."

For Technical Specifications 4.7.6.1.c.2 and 4.7.6.1.d

"ASTM D3803-89 shall be used in place of ANSI N509-1976 as referenced in table 2 of Regulatory Guide 1.52. The laboratory test of charcoal should be conducted at a temperature of 30°C and a relative humidity of 95% within the tolerances specified by ASTM D3803-89."

Additionally, NNECO is proposing to add the following statement to the Bases for Sections 3/4.6.5.1 and 3/4.9.15:

"The laboratory testing requirement for the charcoal sample to have a removal efficiency of  $\geq 95\%$  is more conservative than the value assumed in the accident analyses described in the Millstone Unit No. 2 Final Safety Analysis Report of 90%. A removal efficiency acceptance criterion of  $\geq 95\%$  will ensure that the charcoal has the capability to perform its intended safety function throughout the length of an operating cycle."

Attachments 1 and 2 contain the marked-up and retyped pages of the Millstone Unit No. 2 Technical Specifications, including changes to

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- (3) D. B. Osborne letter to J. F. Opeka transmitting Amendment No. 100 to Operating License No. DPR-65 for Millstone Nuclear Power Station, Unit No. 2, dated June 19, 1985.
  - (4) W. G. Council letter to J. R. Miller, "Millstone Nuclear Power Station, Unit No. 2, Proposed Revision to Technical Specifications, Control Room Habitability Modifications," dated April 2, 1985.

the Bases.

These proposed changes do not alter the conclusions of the submittal made on April 14, 1994. The proposed changes do not pose a condition adverse to safety, do not involve an SHC, and do not involve any irreversible environmental consequences. Listing an acceptance criterion for charcoal efficiency in Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.9.15.b.2 and 4.9.15.c is considered a clarification. Maintaining a removal efficiency of greater than or equal to 95% will ensure that the efficiency remains above the value assumed in the accident analyses described in the Millstone Unit No. 2 FSAR.

NRC Recommendation (3) - Test the Applicable Charcoal Medium in accordance with the Requirements of ASTM D3803-89 Prior to the Approval of the Proposed License Amendment

NNECO recently tested the in-place medium for the "A" and "B" trains of the Control Room Emergency Ventilation, Enclosure Building Filtration, and Spent Fuel Pool Area Ventilation Systems in accordance with the requirements of ASTM D3803-89 on April 17 and 18, 1994, as the NRC Staff had recommended. Each of the charcoal samples had a removal efficiency in excess of 95%. Upon NRC approval of the proposed license amendment, NNECO will consider that these tests met the requirements of the revised Millstone Unit No. 2 Technical Specifications.

Additional NNECO Proposal - Correct References to Amendments on Pages 3/4 6-26 and 3/4 9-17 of the Millstone Unit No. 2 Technical Specifications

Additionally, while performing research in support of the NRC requests, NNECO discovered two administrative errors on Pages 3/4 6-26 and 3/4 9-17 of the Millstone Unit No. 2 Technical Specifications. Currently, these pages reference Amendment No. 61<sup>(5)</sup> as the Amendment of record. The references to Amendment No. 61 are inaccurate; Amendment No. 61 does not modify either of these pages. The Amendment of record for each of these pages is Amendment No. 72.<sup>(6)</sup> Also, Page 3/4 6-26 was revised by Amendment

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- (5) R. A. Clark letter to W. G. Council transmitting Amendment No. 61 to Operating License No. DPR-65 for Millstone Nuclear Power Station, Unit No. 2, dated October 6, 1980.
  - (6) E. L. Conner letter to W. G. Council transmitting Amendment No. 72 to Operating License No. DPR-65 for Millstone Nuclear Power Station, Unit No. 2, dated February 22, 1982.



No. 25.<sup>(7)</sup> NNECO is proposing to add crossed-out references to Amendment Nos. 25 and 72 for Page 3/4 6-26 and to Amendment No. 72 for Page 3/4 9-17. These proposed changes would establish a history for the subject pages.

These proposed changes are administrative in nature. They do not alter the intent of the proposed changes submitted on April 14, 1994; therefore, the safety assessment, SHC, and environmental consideration forwarded in that submittal remain valid.

### Conclusion

This submittal responds to the NRC Staff's requests made on April 15, 1994. NNECO proposes to:

- 1) Revise the proposed footnote associated with Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.7.6.1.c.2, 4.7.6.1.d, 4.9.15.b.2, and 4.9.15.c to specify that the laboratory test of charcoal be conducted at a temperature of 30°C and a relative humidity of 95% within the tolerances specified by ASTM D3803-89;
- 2) Revise the proposed footnote associated with Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.9.15.b.2, and 4.9.15.c to include a removal efficiency acceptance criterion of greater than or equal to 95% for the charcoal samples;
- 3) Revise the Bases for Millstone Unit No. 2 Technical Specifications 3/4.6.5.1 and 3/4.9.15 to describe the rationale for the removal efficiency acceptance criterion; and
- 4) Correct two administrative errors on Pages 3/4 6-26 and 3/4 9-17 of the Millstone Unit No. 2 Technical Specifications.

These proposals do not alter the conclusions of the submittal dated April 14, 1994. The proposed changes do not pose a condition adverse to safety, do not involve an SHC, and do not involve any irreversible environmental consequences. NNECO's proposal to revise Millstone Unit No. 2 Technical Specifications 4.6.5.1.b.2, 4.6.5.1.c, 4.7.6.1.c.2, 4.7.6.1.d, 4.9.15.b.2, and 4.9.15.c will permit carbon samples to be tested in accordance with ASTM D3803-89

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(7) G. Lear letter to D. C. Switzer transmitting Amendment No. 25 to Operating License No. DPR-65 for the Millstone Nuclear Power Station, Unit No. 2, dated March 23, 1977.

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versus ANSI N509-1976. ASTM Standard D3803-89 is used industry-wide, and is acknowledged by the NRC as an improved method for the testing of activated charcoal bed filters. In addition, testing in accordance with ASTM Standard D3803-89 yields more accurate results than testing in accordance with ANSI N509-1976.

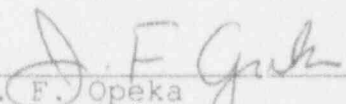
As previously stated, NNECO has tested the charcoal medium for the Control Room Emergency Ventilation System, Enclosure Building Filtration System, and Spent Fuel Pool Area Ventilation System in accordance with the requirements of ASTM D3803-89. Each of the charcoal samples tested had removal efficiencies in excess of 95%.

In accordance with 10CFR50.91(b), we are providing the State of Connecticut with a copy of this proposed amendment via facsimile to ensure their awareness of this request.

If the NRC Staff should have any questions or comments regarding this submittal, please contact Mr. R. H. Young at (203) 665-3717. We will promptly provide any additional information the NRC Staff may need to respond to this request, and we appreciate your efforts in support of this request.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
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J. F. Opeka  
Executive Vice President

cc: T. T. Martin, Region I Administrator  
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2  
P. D. Swetland, Senior Resident Inspector, Millstone Unit  
Nos. 1, 2, and 3

Mr. Kevin T.A. McCarthy, Director  
Monitoring and Radiation Division  
Department of Environmental Protection  
79 Elm Street  
P.O. Box 5066  
Hartford, CT 06102-5066

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Subscribed and sworn to before me

this 29 day of April, 1994

Eleanor C. Lambert

Date Commission Expires: 1/31/98

**ELEANOR C. LAMBERT**  
Notary Public  
My Commission Expires Jan. 31, 1998