

**Northeast
Nuclear Energy**

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The Northeast Utilities System

MAY 8 1997

Docket No. 50-336
B16343

Re: 10CFR50.90

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

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Meteorological Instrumentation (TAC No. M97746)

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO), in a letter dated January 17, 1997, proposed to amend Operating License DPR-65 by changing the Technical Specifications of Millstone Unit No. 2. The proposed changes modified Table 3.3-8, "Meteorological Monitoring Instrumentation," and Basis Section 3/4.3.3.4, "Meteorological Instrumentation." The purpose of the proposed changes was to modify the minimum accuracy stated in Table 3.3-8 for the instruments used to measure wind speed and air temperature - delta T. Further review of the meteorological monitoring instrument loops used to monitor Technical Specification compliance has identified additional inaccuracies beyond the values contained in the original license amendment request. NNECO is proposing to revise the earlier values by submitting a separate amendment request to include the new instrument accuracies in Table 3.3-8. This license amendment request supersedes the license amendment request dated January 17, 1997. 111
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Attachment 1 provides a discussion of the proposed changes. Attachment 2 provides the Significant Hazards Consideration. Attachment 3 provides the marked-up version of the appropriate pages of the current Technical Specifications. Attachment 4 provides the retyped pages of the Technical Specifications.

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The proposed changes were evaluated utilizing the criteria of 10CFR50.59, and were determined to involve an unreviewed safety question because the accuracy requirements for the instrumentation used to monitor air temperature - delta T and wind speed are nonconservative with respect to the requirements of Regulatory Guide 1.23. (The current basis for Technical Specification 3/4.3.3.4 states the instrumentation is consistent with Regulatory Guide 1.23.) Thus, the license amendment request does involve a reduction in the margin of safety as defined in the basis for Technical Specification 3/4.3.3.4. However, since the change a) does not result in any increase in initiating event frequency, b) does not adversely affect the probability of failure of operator mitigation, c) does not adversely affect the probability of failure of mitigating equipment, and d) does not adversely impact the consequences of the design basis analysis, it has been concluded to be safe.

The proposed changes **do not** involve a significant impact on public health and safety (see the Safety Assessment provided in Attachment 1) and **do not** involve a Significant Hazards Consideration pursuant to the provisions of 10CFR50.92 (see the Significant Hazards Consideration provided in Attachment 2).

Environmental Considerations

NNECO has reviewed the proposed license amendment request against the criteria of 10CFR51.22 for environmental considerations. The proposed changes modify the minimum accuracy for the instruments used to measure wind speed and air temperature - delta T. These changes do not increase the type and amount of effluents that may be released offsite. In addition, this amendment request will not significantly increase individual or cumulative occupational radiation exposures. Therefore, NNECO has determined the proposed changes will not have a significant effect on the quality of the human environment.

Plant Operations Review Committee and Nuclear Safety Assessment Board

The Plant Operations Review Committee and Nuclear Safety Assessment Board have reviewed and concurred with these determinations.

Schedule

We request issuance at your earliest convenience, with the amendment to be implemented within 30 days of issuance.

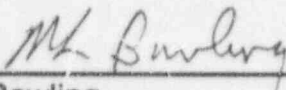
State Notification

In accordance with 10CFR50.91(b), a copy of this license amendment request is being provided to the State of Connecticut.

If you should have any questions on the above, please contact Mr. Ravi Joshi at
(860) 440-2080.

Very truly yours,

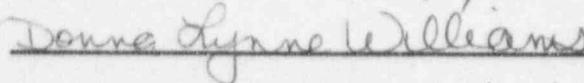
NORTHEAST NUCLEAR ENERGY COMPANY



M. L. Bowling
Millstone Unit No. 2 Recovery Officer

Subscribed and sworn to before me

this 8 day of May, 1997



Donna Lynne Williams

Date Commission expires 11/30/2001

DONNA LYNNE WILLIAMS
NOTARY PUBLIC
STATE OF CONNECTICUT

Attachments (4)

cc: H. J. Miller , Region I Administrator
D. G. McDonald, Jr., NRC Project Manager, Millstone Unit No. 2
D. P. Beaulieu, Senior Resident Inspector, Millstone Unit No. 2
W. D. Travers, PhD, Director, Special Projects
W. D. Lanning, Director, Millstone Assessment Team

Kevin T. A. McCarthy, Director
Bureau of Air Management
Monitoring and Radiation Division
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Attachment 1

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Meteorological Instrumentation
Discussion of Proposed Changes

May 1997

**Proposed Revision to Technical Specifications
Meteorological Instrumentation
Discussion of Proposed Changes**

Introduction

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO), in a letter dated January 17, 1997, proposed to amend Operating License DPR-65 by changing the Technical Specifications of Millstone Unit No. 2. The proposed changes modified Table 3.3-8, "Meteorological Monitoring Instrumentation," and Bases Section 3/4.3.3.4, "Meteorological Instrumentation." The purpose of the proposed changes was to modify the minimum accuracy stated in Table 3.3-8 for the instruments used to measure wind speed and air temperature - delta T. Further review of the meteorological monitoring instrument loops used to monitor Technical Specification compliance has identified additional inaccuracies beyond the values contained in the original license amendment request. NNECO is proposing to revise the earlier values by submitting a separate amendment request to include the new instrument accuracy in Table 3.3-8. This license amendment request supersedes the license amendment request dated January 17, 1997.

Background

In Licensee Event Report (LER) 50-336/96-034-00,¹ Millstone Unit No. 2 reported that the instrumentation used to monitor air temperature - delta T did not meet the instrument minimum accuracies as required by Technical Specification 3/4.3.3.4.

A license amendment request was submitted in a letter dated January 17, 1997 to resolve the issues discussed in the LER. This submittal supersedes the original license amendment request and, if granted by the NRC, will resolve the condition reported in LER 50-336/96-034-00.

In addition to the inaccuracies associated with the meteorological monitoring instrument loops, Millstone Unit No. 2 has determined it is necessary to account for a loss of environmental control (building heating and/or cooling) in the Environmental Data Acquisition Network (EDAN) building. Therefore, NNECO proposes to modify the Technical Specification accuracy requirements for the Millstone Unit No. 2 meteorological instrumentation that measures wind speed and air temperature delta - T. The proposed accuracy requirements, which include additional margin to account for any additional uncertainty, do not meet the accuracy requirements contained in Regulatory Guide 1.23.

¹ P. M. Richardson letter to U.S. Nuclear Regulatory Commission, Licensee Event Report 50-336/96-034-00, dated December 9, 1996.

The accuracy requirements for meteorological instrumentation are contained in Regulatory Guide 1.23 (Safety Guide 23) dated March 17, 1972. Regulatory Guide 1.97, Rev. 2, also provides accuracy requirements for meteorological instrumentation variables. These variables are classified as Type E.

Assuming a loss of environmental control in the EDAN building, the following conclusions can be made concerning the accuracy of the Millstone Unit No. 2 meteorological instrumentation.

1. The wind direction instrumentation accuracy ($\pm 2.2^\circ$) at Millstone Unit No. 2 meets the accuracy requirements of Regulatory Guide 1.23 ($\pm 5.0^\circ$) and Regulatory Guide 1.97 Rev. 2 ($\pm 5.0^\circ$).
2. The wind speed instrumentation accuracy (0 to 15 mph ± 0.16 mph, above 15 mph $\pm 1.09\%$) at Millstone Unit No. 2 meets the accuracy requirements of Regulatory Guide 1.23 (± 0.5 mph) and Regulatory Guide 1.97, Rev. 2, (0 to 67 mph ± 0.5 mph) up to a wind speed of approximately 45 mph. [Regulatory Guide 1.97, Rev. 2, does not specify an accuracy requirement for the entire 0 to 67 mph range. For comparison purposes, the accuracy value of 0.5 mph has been applied to the entire 0 to 67 mph range.]
3. The delta-T instrumentation accuracy ($\pm 0.55^\circ\text{C}$ (0.99°F)) at Millstone Unit No. 2 does not meet the accuracy requirements of either Regulatory Guide 1.23 ($\pm 0.1^\circ\text{C}$ (0.18°F)) or Regulatory Guide 1.97, Rev. 2, (atmospheric stability $\pm 0.15^\circ\text{C}$ (0.27°F) per 50 meter intervals). [Regulatory Guide 1.97 Rev. 2, accuracy values of 0.15°C and 0.3°F are not equivalent. 0.15°C is equivalent to 0.27°F and 0.3°F is equivalent to 0.17°C . For comparison purposes, the values of 0.15°C and 0.27°F have been used.]

The accuracy requirements contained in Regulatory Guide 1.23 are for time averaged values of wind speed and temperature. The accuracy requirement for wind direction is instantaneous. Regulatory Guide 1.97, Rev. 2, does not specify time averaged or instantaneous.

Meteorological data can be obtained from the Millstone Unit No. 2 plant process computer and from EDAN. The plant process computer provides instantaneous values of wind speed, wind direction, and delta - T. The plant process computer also provides time averaged values of wind speed and wind direction. EDAN provides time averaged values of wind speed, wind direction, and delta - T.

Based on the above results, NNECO proposes to modify the Technical Specification accuracy requirements for the Millstone Unit No. 2 meteorological instrumentation that measures wind speed and delta - T. The proposed accuracy requirements, which

include additional margin to account for any additional uncertainty, do not meet the requirements contained in Regulatory Guide 1.23.

Design Basis and Licensing Basis

The data from the meteorological instrumentation are used to:

- a) estimate public dose from routine or accidental releases of airborne radioactivity;
- b) make decisions regarding actions to take to protect the public in the event of an accident involving the release of airborne radioactivity; and
- c) establish radiological dispersion parameters to determine radiological doses in design basis accident calculations.

Description of Proposed Changes

This submittal, which supersedes the original submittal dated January 17, 1997, provides the license amendment request which, if granted by the NRC, will resolve the condition reported in LER 50-336/96-034-00². NNECO proposes to modify the Millstone Unit No. 2 Technical Specifications by:

1. changing the minimum accuracy stated in Table 3.3-8 for the instruments used to measure wind speed. The current minimum accuracy for these instruments is " ± 0.22 m/sec*." The revised minimum accuracy for these will be "Wind Speed ≤ 2.2 m/sec (5 mph) ; ± 0.22 m/sec* (0.5 mph)" and "Wind Speed > 2.2 m/sec (5 mph) ; $\pm 10\%$ of measured value*."
2. changing the minimum accuracy stated in Table 3.3-8 for the instruments used to measure air temperature - delta T. The current minimum accuracy for these instruments is " ± 0.18 °F." For the instrument at elevation 142 feet, and the instrument at elevation 374 feet, the revised minimum accuracy will be " ± 0.56 °C (± 1.0 °F)."
3. modifying Bases Section B3/4.3.3.4 to state that the instrumentation used to monitor air temperature - delta T and wind speed (when wind speed is greater than 2.2 m/sec (5 mph)) does not meet the recommendations of Regulatory Guide 1.23 regarding accuracy.
4. providing the concurrent metric equivalent for the elevations (43.3 meters and 114 meters).

² P. M. Richardson letter to U.S. Nuclear Regulatory Commission, Licensee Event Report 50-336/96-034-00, dated December 9, 1996.

5. providing the concurrent British equivalent for the starting threshold of the anemometer (1.0 mph).

Safety Assessment

The proposed license amendment request modifies the minimum accuracy requirements for the instruments used to measure wind speed and air temperature - delta T to comply with Technical Specification 3/4.3.3.4, and it modifies Bases Section 3/4.3.3.4 to identify that the instrumentation used to monitor air temperature - delta T and wind speed (when wind speeds are greater than 2.2 m/sec (5 mph)) does not meet the accuracy requirements of Regulatory Guide 1.23.

The data from the meteorological instrumentation are used to:

- a) estimate public dose from routine or accidental releases of airborne radioactivity;
- b) make decisions regarding actions to take to protect the public in the event of an accident involving the release of airborne radioactivity; and
- c) establish radiological dispersion parameters to determine radiological doses in design basis accident calculations.

The proposed minimum instrument accuracy requirements are more than sufficient to meet the purposes denoted above. The meteorological parameters measurement uncertainties insignificantly affect the results when compared to the accuracies of the source term estimates, meteorological dispersion models, dose models, and meteorological forecasting. In addition, the calculations performed to determine the instrument uncertainties did not conclude that there is any consistent instrument bias in one direction of a measured parameter. Therefore, there should be no impact on offsite doses associated with previously evaluated accidents, or accuracy in performing other dose assessments.

The proposed changes do not alter the way any structure, system, or component functions and do not alter the manner in which the plant is operated. They do not have any impact on the protective boundaries (e.g., fuel matrix and cladding, reactor coolant system pressure boundary, and primary and secondary containment), or on the safety limits for these boundaries. Therefore, the change can not impact the probability of initiation of an accident and can not impact the probability that mitigating equipment will fail.

The proposed changes do not alter how any instruments, safety systems or components function. However, they modify the accuracy requirements for the instruments which are used to measure wind speed and air temperature - delta T. The data obtained from these instruments are used to estimate the public dose following routine or accidental releases of airborne radioactivity and make decisions regarding actions to protect the public in the

event of an accident involving a release of airborne radioactivity. The uncertainties associated with the measurement of meteorological parameters insignificantly affect the results when compared to the accuracies of the source term estimates, meteorological dispersion models, dose models, and meteorological forecasting. Thus, the changes should not affect the probability that the operators or the Emergency Plan personnel will fail to mitigate an accident.

Thus, the proposed license amendment request does not have a significant impact on public health and safety.

Docket No. 50-336
B16343

Attachment 2

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Meteorological Instrumentation
Significant Hazards Consideration

May 1997

**Proposed Revision to Technical Specifications
Meteorological Instrumentation
Significant Hazards Consideration**

Significant Hazards Consideration

In accordance with 10CFR50.92, NNECO has reviewed the proposed changes and has concluded that they do not involve a significant hazards consideration (SHC). The basis for this conclusion is that the three criteria of 10CFR50.92(c) are not compromised. The proposed changes do not involve an SHC because the changes would not:

1. Involve a significant increase in the probability or consequence of an accident previously evaluated.

The proposed changes modify the accuracy requirements for the instruments which are used to measure wind speed and air temperature - delta T. The data obtained from the meteorological instrumentation would be used to: a) estimate the public dose following routine or accidental releases of airborne radioactivity, b) make decisions regarding actions to protect the public in the event of an accident involving a release of airborne radioactivity, and c) establish radiological dispersion parameters to determine radiological doses in design basis accident calculations.

The proposed minimum instrument accuracy requirements are more than sufficient to meet the purposes denoted above. The meteorological parameters measurement uncertainties insignificantly affect the results when compared to the accuracies of the source term estimates, meteorological dispersion models, dose models, and meteorological forecasting. Therefore, there is no impact on the consequences (offsite doses) associated with previously evaluated accidents.

The proposed changes do not alter the way any structure, system, or component functions, do not alter the manner in which the plant is operated, and do not have any impact on the protective boundaries and safety limits for the protective boundaries. Therefore, the proposed changes do not impact the probability of any previously evaluated accidents.

Thus, the license amendment request does not impact the probability of an accident previously evaluated nor does it involve a significant increase in the consequence of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes modify the accuracy requirements for the instruments which are used to measure wind speed and air temperature - delta T. The data provided by these instruments assist in responding to a design basis accident which may involve a release of airborne radioactivity. The instruments are used for post accident monitoring and serve a passive role; they cannot initiate or mitigate any accident.

The proposed changes do not alter the way any structure, system, or component functions and do not alter the manner in which the plant is operated. They do not introduce any new failure modes.

Thus, the license amendment request does not create the possibility of a new or different kind of accident from any previously analyzed.

3. Involve a significant reduction in a margin of safety.

As discussed above, the proposed changes modify the accuracy requirements for the instruments which are used to measure wind speed and air temperature - delta T which could impact the radiological dispersion coefficient used to determine radiological doses in design basis accident calculations. However, the differences in the instrument accuracies and the Regulatory Guide 1.23 requirements have been determined not to significantly affect the dispersion coefficients. Thus, there is no significant impact on offsite doses associated with previously analyzed accidents. Therefore, there is no significant reduction in the margin of safety for the design basis accident analysis.

Thus, the license amendment request does not involve a significant reduction in the margin of safety.