

Northeast
Utilities System

Millstone Offices • Rope Ferry Rd., Waterford, CT

P.O. Box 128
Waterford, CT 06385-0128
(203) 447-1791

January 17, 1997

Docket No. 50-336
B16168

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

Introduction

Pursuant to 10CFR50.90, Northeast Nuclear Energy Company (NNECO) hereby proposes to amend Operating License DPR-65 by incorporating the attached proposed changes into the Technical Specifications of Millstone Unit No. 2. The proposed changes modify Table 3.3-8, "Meteorological Monitoring Instrumentation," and Bases Section 3/4.3.3.4, "Meteorological Instrumentation." The purpose of the proposed changes is to modify the minimum accuracy stated in Table 3.3-8 for the instruments used to measure wind speed and air temperature - delta T.

Attachment 1 provides a description of the proposed changes. Attachment 2 provides a Safety Evaluation. Attachment 3 provides a Safety Assessment and Significant Hazards Consideration. Attachment 4 provides the marked-up version of the appropriate pages of the current Technical Specifications. Attachment 5 provides the retyped pages of the Technical Specifications.

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. In the LER, we stated:

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

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"A Technical Specification revision will be requested to remove the instrument accuracy requirements of Table 3.3-8. This revision will be submitted to the NRC by December 20, 1996," and

"The meteorological instrumentation accuracy requirements and criteria will be clarified and appropriate requirements will be placed in an administrative document consistent with industry practice."

These commitments were modified in a discussion with the NRC Project Manager. In the discussion, we stated we would modify the accuracy requirements contained in Technical Specifications versus removing them. Also, we stated that the license amendment request would be submitted by January 17, 1997.

This submittal provides the license amendment request which, if granted by the NRC, will resolve the condition reported in LER 50-336/96-034-00.

Conclusions

The proposed changes were evaluated utilizing the criteria of 10CFR50.59, and were determined to be an unreviewed safety question. The evaluation (see the Safety Evaluation provided in Attachment 2) determined that the proposed changes involved a reduction in the margin of safety as defined in the basis of Technical Specification 3/4.3.3.4. Additionally, the evaluation concluded that the proposed changes are safe.

The proposed changes **do not** involve a significant impact on public health and safety (see the Safety Assessment provided in Attachment 3) and **do not** involve a Significant Hazards Consideration pursuant to the provisions of 10CFR50.92 (see the Significant Hazards Consideration provided in Attachment 3).

Additionally, NNECO has reviewed the proposed license amendment request against the criteria of 10CFR51.22 for environmental considerations. The proposed changes do not increase the type and amounts of effluents that may be released off site, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, NNECO concludes that the proposed changes meet the criteria delineated in 10CFR51.22(c)(9) for categorical exclusion from the requirements for an environmental impact statement.

Plant Operations Review Committee and Nuclear Safety Assessment Board

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

Schedule

We request issuance at your earliest convenience, with the amendment to be implemented within 60 days of issuance.

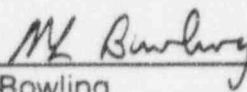
State Notification

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



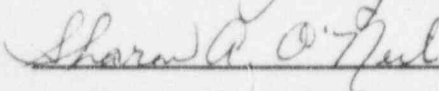
M. L. Bowling
Millstone Unit No. 2 Recovery Officer

Attachments (5)

cc: H. J. Miller, Region I Administrator
D. G. McDonald, Jr., NRC Project Manager, Millstone Unit No. 2
D. Beaulieu, Acting Senior Resident Inspector, Millstone Unit No. 2
Dr. W. D. Travers, Director, Special Projects
W. D. Lanning, Director, Millstone Assessment Team
J. F. Rogge, Chief, Projects Branch No. 8
Mr. Kevin T. A. McCarthy, Director, Monitoring and Radiation Division,
Department of Environmental Protection

Subscribed and sworn to before me

this 17 day of January 1997



Date Commission Expires: _____

My Commission Expires March 31, 1997

Attachment 1

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

January 1997

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

Description of Proposed Changes

In Licensee Event Report (LER) 50-336/96-034-00,² Millstone Unit No. 2 (MP2) 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.

This submittal provides the license amendment request which, if granted by the NRC, will resolve the condition reported in LER 50-336/96-034-00. NNECO proposes to modify the MP2 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); 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 " $\pm 0.18^{\circ}\text{F}$." For the instrument at elevation 142 feet, the revised minimum accuracy would be " $\pm 0.15^{\circ}\text{C}$ ($\pm 0.27^{\circ}\text{F}$).\" For the instrument at elevation 374 feet, the revised minimum accuracy would be " $\pm 0.31^{\circ}\text{C}$ ($\pm 0.56^{\circ}\text{F}$).\"
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 speeds are greater than 5 mph) do 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).
5. providing the concurrent British equivalent for the starting threshold of the anemometer (1.0 mph).

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

Attachment 2

Millstone Nuclear Power Station, Unit No. 2
Proposed Revision to Technical Specifications
Meteorological Instrumentation
Safety Evaluation

January 1997

**Proposed Revision to Technical Specifications
Meteorological Instrumentation
Safety Evaluation**

1. SUMMARY INFORMATION

1.1 Safety Evaluation Conclusions

The accuracy requirements for the instrumentation used to monitor air temperature - delta T and wind speed (when wind speeds are greater than 5 MPH) are not consistent with the Regulatory Guide 1.23. Thus the license amendment request does involve an unreviewed safety question and 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.

1.2 Description of the Change

Licensee Event Report (LER) 96-034-00 identified that the installed meteorological monitoring instrumentation did not meet the instrument minimum accuracies as required by Technical Specification 3/4.3.3.4. Therefore, the subject proposed technical specification change request (PTSCR) proposes to modify the MP2 Technical Specification by changing the minimum accuracies stated in table 3.3-8 for instruments used to measure wind speed and air temperature - delta T. This PTSCR also modifies the bases section B3/4.3.3.4 to state that the air temperature - delta T instrument and wind speed (when wind speeds are greater than 5 MPH) do not meet the recommended accuracies as stated by Regulatory Guide 1.23. The data obtained from these instruments are 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 release of airborne radioactivity, and c) establish radiological dispersion models to determine radiological doses in design basis accident calculations. This increase in minimum instrument accuracy has been evaluated for impact on the above calculations and/or actions.

1.3 Aspects of the Change Evaluated

This evaluation summarizes the results of the Safety Assessment, Safety Evaluation and the Significant Hazards Consideration performed for the PTSCR which address the reduction in the instrument minimum accuracies used for meteorological monitoring. It also evaluates the effect of the change on safety analysis and margins of safety.

1.4 Malfunctions Evaluated

As stated in section 1.2, the data obtained from these instruments are 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 release of airborne radioactivity, and c) establish radiological dispersion models to determine radiological doses in design basis accident calculations. Therefore, it should be noted that since the change impacts an analysis assumption and/or a post accident monitoring functions, it can not introduce failure modes of a different type than previously analyzed nor can it affect malfunctions of equipment previously analyzed.

2. UNREVIEWED SAFETY QUESTION DETERMINATION

2.1 Impact on Previously Evaluated Accidents

2.1.1. List of Accidents Evaluated

All accidents resulting in the release of radioactivity in to the environment such as LOCA, Steam Line Break, Steam Generator Tube Rupture and etc. could potentially be affected by an impact on the dispersion factors.

2.1.2 Effect on the Probability of Occurrence of Previously Evaluated Accidents

Since the change is in the stated accuracy of post accident monitoring instruments only, the change cannot impact the probability of any previously evaluated accident.

2.1.3 Effect on the Probability of Occurrence of a Previously Evaluated Malfunction of Equipment Important to Safety

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, do not have any impact on the protective boundaries and or

safety limits for the boundaries. Therefore, the change can not impact the probability of occurrence of a previously evaluated malfunction of equipment important to safety.

2.1.4 Effect on the Consequences of the Previously Evaluated Accidents

As discussed in Attachment 1, 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 these instruments are 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 release of airborne radioactivity, and c) were used to **establish radiological dispersion models to determine radiological doses in design basis accident calculations.** Regulatory Guide 1.4 provides specific assumptions and equations that are to be used in the calculation of the atmospheric diffusion coefficients, utilizing pre-specified or site specific dispersion models, which are ultimately used in offsite dose calculations. These models utilize wind speed and air temperature - delta T historic data which are gathered utilizing onsite meteorological instruments. Although instrument inaccuracies are not included in the subject equations, however, as stated in References 2 and 3, the NRC staff is under the impression that our installed instrumentation is consistent with the recommendations of Regulatory Guide 1.23 "Onsite Meteorological programs". This evaluation has reviewed the difference in the installed instrument accuracy and the Regulatory Guide 1.23 instrument accuracy requirements and it has concluded that the difference will not significantly effect the dispersion coefficients. Thus, there is no impact on offsite doses associated with previously evaluated accidents.

2.1.5 Effect on the Consequences of a Previously Evaluated Malfunction of Equipment Important to Safety

As discussed in 2.1.3, 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. Thus, there is no increase in consequences of a previously evaluated malfunction of equipment important to safety.

2.2 Potential for a New Unanalyzed Accident

2.2.1 Possibility of an Accident of a Different Type than Previously Evaluated

The change impacts the stated accuracy of an instrument which is used for post accident monitoring. Hence, it cannot create the possibility of an accident of different type.

2.2.2 Possibility of a Malfunction of a Different Type than Previously Evaluated

As discussed in Section 2.2.1, the change impacts the stated accuracy of an instrument which is used for post accident monitoring. Thus it can not introduce a possibility of a malfunction of a different type.

2.3 Impact on the Margin of Safety

As discussed in section 2.1.4, 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 coefficients used to determine radiological doses in design basis accident calculations. However, the difference in the instrument accuracy and the Regulatory Guide 1.23 requirements have been judged not to significantly effect the dispersion coefficients. Thus, there is no significant impact on offsite doses associated with previously evaluated accidents. Therefore, there is no significant reduction in the margin of safety for the design basis accident analysis. However, the proposed accuracy requirement for the wind speed and air temperature - delta T instrumentation is not consistent with the Regulatory Guide 1.23 which is a contradiction to a) the statements made in the Reference 3 memorandum which states that "The MP2 installed instrumentation and proposed specifications remain consistent with the recommendations of Reg. Guide 1.23 ..." b) the NRC's conclusions of Reference 2 SER, which states that "The applicants upgraded meteorological program is in accord with the recommendations of Reg. Guide 1.23", and c) the current bases of Technical Specification 3/4.3.3.4. Therefore compliance with this Regulatory Guide is deemed to be a "margin of safety" in that MP2 meteorological monitoring was judged acceptable because it conformed to Reg. Guide 1.23. Thus the license amendment request does involve an unreviewed safety question and a reduction in the margin of safety as defined in the basis for Technical Specification 3/4.3.3.4.

3. SAFETY DETERMINATION

3.1 Qualitative Safety Determination

As discussed above, since the proposed accuracy requirement for the air temperature - delta T instrumentation is not consistent with the Regulatory Guide 1.23, which is in the current bases of Technical Specification 3/4.3.3.4, the license amendment request does involve an unreviewed safety question and a reduction in the margin of safety as defined in the basis for Technical Specification 3/4.3.3.4. Section 3.2 provides the safety determination.

3.2 Detailed Safety Determination

3.2.1 Effect on the Probability of Initiation of an Accident

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, do not have any impact on the protective boundaries and or safety limits for the boundaries. Therefore, the change can not impact the probability of initiation of an accident.

3.2.2 Effect on the Probability that Operators Will Fail to Mitigate an Accident

The proposed changes do not alter any instruments, safety system or component 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 release of airborne radioactivity. As stated in Reference 1, the uncertainties associated with the measurement of meteorological parameters are insignificant when compared to the uncertainties of the source term estimates, meteorological dispersion models, dose models, and meteorological forecasting. Thus, the changes can not affect the probability that the operators or the E-plan personnel will fail to mitigate an accident.

3.2.3 Effect on the Probability that Mitigating Equipment Will Fail

As stated in section 3.2.1, 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, do not have any impact on the protective boundaries and or safety limits for the boundaries.

Therefore, the proposed change does not impact the probability that mitigating equipment will fail.

3.2.4 Effect on the Consequences of an Accident

As stated previously, the data from this instruments are used to measure and document basic meteorological data for use in development of atmospheric diffusion parameters and or estimation of radiation doses to the public resulting from actual routine or accidental releases of radioactive materials to the atmosphere or to evaluate the potential dose to the public as a result of hypothetical reactor accidents. As stated in section 2.1.4, the estimate of impact of proposed change of the instrument accuracy has been judged to be insignificant. Therefore, the proposed change does not impact the consequences of an accident.

3.2.5 Safety Determination Conclusion

This Safety Evaluation along with it's supporting documentation, the PTSCR and Reference 1, has evaluated the proposed modification and concluded the followings:

- 1.) The change does not result in any increase in initiating event frequency.
- 2.) The change does not adversely affect the probability of failure of operator mitigation.
- 3.) The change does not adversely affect the probability of failure of mitigating equipment.
- 4.) The change does not adversely impact the consequences of the design basis analysis.

Based on this, the proposed modification is safe.

References

1. Memo, R. A. Crandall to C. F. Cristallo, "Meteorological Instrumentation Accuracy," RB-96-211. Dated 12/12/96
2. Safety Evaluation, Docket No 50-336. May 10, 1974.
3. Memo, D. C. Switzer to USNRC, "Millstone Nuclear Power Station, Unit 2 Proposed Revisions to Technical Specifications". Docket No. 50-336, October 12, 1977

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Attachment 3

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

January 1997

**Proposed Revision to Technical Specifications
Meteorological Instrumentation
Safety Assessment and Significant Hazards Consideration**

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 B3/4.3.3.4 to identify that the instrumentation used to monitor air temperature - delta T and wind speed (when wind speeds are greater than 5 mph) do not meet the accuracy requirements of Regulatory Guide 1.23.

The data from the meteorological instrumentation is 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 models 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 uncertainties associated with the measurement of meteorological parameters are insignificant when compared to the uncertainties of the source term estimates, meteorological dispersion models, dose models, and meteorological forecasting. Thus, the proposed license amendment request does not have a significant impact on public health and safety.

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 models 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 uncertainties associated with the measurement of meteorological parameters are insignificant when compared to the uncertainties of the source term estimates, meteorological dispersion models, dose models, and meteorological forecasting.

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 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 instruments do not perform a safety function. The data provided by these instruments assist in responding to a design basis accident which involved a release of airborne radioactivity. The instruments 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.

The proposed changes modify the accuracy requirements for the instruments which are used to measure wind speed and air temperature - delta T. The instruments do not perform a safety function. The data provided by these instruments assist in responding to a design basis accident which involved a release of airborne radioactivity. The instruments serve a passive role.

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.

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