



**Northeast
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The Northeast Utilities System

FEB 14 2000

Docket No. 50-336
B17979

Re: 10 CFR 50.12
10 CFR 50, Appendix R

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

Millstone Nuclear Power Station, Unit No. 2
10 CFR 50, Appendix R
Request for Exemption

Pursuant to 10 CFR 50.12, Northeast Nuclear Energy Company (NNECO), on behalf of Millstone Unit No. 2, hereby requests exemption from the requirements of 10 CFR 50, Appendix R, Section III.J. 10 CFR 50.12(a) allows exemption requests if a licensee can show that application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule.

10 CFR 50, Appendix R, Section III.J, requires emergency lighting units with at least an 8-hour battery power supply in all areas needed for the operation of safe shutdown equipment and in access and egress routes thereto. As a result of the decommissioning of Millstone Unit No. 1, and a revised Unit 2 Appendix R compliance strategy, the alternate power source which had been provided from Unit No. 1, will now be provided from the Unit No. 3 Alternate AC (AAC) diesel generator. The AAC diesel generator is located in the Unit No. 3 yard area. Access to the diesel generator and associated switchgear to start the diesel and make the necessary electrical ties to Unit No. 2 requires travel through the Unit No. 3 yard area. These actions will be performed by Millstone Unit No. 3 operators. However, NNECO reserves the option to train and utilize other personnel in the future. Any changes would be evaluated, as appropriate.

The design modifications associated with this change, and the revised Appendix R compliance strategy are being evaluated by NNECO separately. The modifications are being implemented during the upcoming Millstone Unit No. 2 refueling outage (2R13). Therefore, NNECO requests NRC review and approval of this exemption prior to Mode 4 restart from 2R13, tentatively scheduled for May 26, 2000.

NNECO requests an exemption from the requirements of 10 CFR 50, Appendix R, Section III.J, to the extent that the security lighting system shall be credited for access and egress route emergency lighting in lieu of providing emergency lighting units with an 8-hour battery power supply in the yard area. The basis for this request is contained in Attachment 1. It should be noted that this exemption request is specific to the access/egress within the yard area. Lighting in the AAC enclosure will meet the requirements of Appendix R.

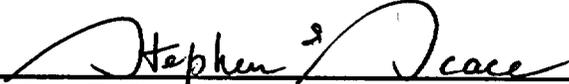
The requested exemption satisfies the requirements of 10 CFR 50.12 in that it is authorized by law, will not present an undue risk to the public health and safety, is consistent with the common defense and security, and involves special circumstances. NNECO requests that the NRC Staff grant the exemption requested in Attachment 1, since the application of the regulations in these particular circumstances is not necessary to achieve, nor would serve, the underlying purpose of 10 CFR 50, Appendix R.

There are no regulatory commitments contained within this letter.

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

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY



Stephen E. Scace
Director - Nuclear Oversight and
Regulatory Affairs

Attachment 1: Yard Area Lighting

cc: H. J. Miller, Region 1 Administrator
J. I. Zimmerman, NRC Project Manager, Millstone Unit No. 2
D. P. Beaulieu, Senior Resident Inspector, Millstone Unit No. 2

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Attachment 1

Millstone Nuclear Power Station, Unit No. 2

**Request for 10 CFR 50, Appendix R Exemption
Yard Area Lighting**

February 2000

Exemption Request

Section III.J of 10 CFR 50, Appendix R, requires that emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.

NNECO requests an exemption from the requirements of 10 CFR 50, Appendix R, Section III.J to the extent that the security lighting system shall be credited for access and egress route emergency lighting in lieu of an 8-hour battery supply in Unit No. 3 yard areas. This exemption is similar to an exemption previously approved by the NRC for Unit No. 1 and Unit No. 2 yard areas. It should be noted that this exemption request is specific to the access/egress within the yard area. Lighting in the AAC enclosure will meet the requirements of Appendix R.

Background

In a letter dated October 8, 1986,⁽¹⁾ NNECO requested an exemption from the requirements of 10 CFR 50, Appendix R, Section III.J, as these requirements applied to the Unit No. 1 Vital Electrical Bus 24F which was required for operation of Unit No. 2 safe shutdown equipment. Specifically, NNECO proposed to utilize hand-held lighting units in lieu of 8-hour rated battery-powered lighting units for access and egress associated with Electrical Bus 24F located in the switchyard which necessitated travel in the yard area.

In a letter dated January 15, 1987,⁽²⁾ the NRC granted an exemption from the requirements of Section III.J as these provisions applied to emergency lighting for the operation of Electrical Bus 24F and the access/egress associated with this equipment based on NNECO's proposed alternate emergency lighting to be provided by portable equipment (Note: The Unit No. 1 Electrical Bus 24F has been redesignated Bus 14H).

As a result of a revised Unit 2 Appendix R compliance strategy for achieving safe shutdown, two additional yard areas were identified by NNECO through which travel would be required for operation of safe shutdown equipment. In a letter dated July 31, 1998,⁽³⁾ NNECO requested an exemption from the requirements of 10 CFR 50, Appendix R, Section III.J as these provisions applied to emergency lighting in these two additional areas as well as in the area of Electrical Bus 14H based on the use of the security lighting system for access and egress route emergency lighting in lieu of an 8-hour battery supply in these yard areas.

⁽¹⁾ C. F. Sears letter to A. C. Thadani "Millstone Nuclear Power Station, Unit No. 2 Fire Protection Emergency Lighting," dated October 8, 1986.

⁽²⁾ A. C. Thadani letter to E. J. Mroczka "Appendix R Exemption for Millstone Unit No. 2," dated January 15, 1987.

⁽³⁾ Martin L. Bowling, Jr. letter to the NRC "Millstone Nuclear Power Station, Unit No. 2, 10 CFR 50, Appendix R, Request for Exemptions," dated July 31, 1998.

In a letter dated March 16, 1999,⁽⁴⁾ the NRC granted an exemption from the requirements of 10 CFR 50, Appendix R, Section III.J as these provisions applied to emergency lighting for access/egress associated with the operation of equipment in the following 3 areas:

- Unit No. 1 Electrical Bus 14H
- Unit No. 2 Intake Structure
- Unit No. 2 Refueling Water Storage Tank (RWST) Pipe Chase

As a result of the decommissioning of Millstone Unit No. 1, the revised Unit No. 2 Appendix R compliance strategy for achieving safe shutdown will take credit for a new 4160 volt electrical tie to the Unit No. 3 Alternate AC diesel generator. The existing tie to Unit No. 1 Vital Electrical Bus 14H will be disconnected, and the Appendix R, Section III.J exemption for emergency lighting in the yard area associated with Bus 14H will no longer be required. The yard area exemption for access/egress to the Unit No. 2 Intake Structure and RWST Pipe Chase is still required, and a new exemption is required for access/egress emergency lighting associated with the Unit No. 3 Alternate AC diesel generator.

Description

Access to the Unit No. 3 Alternate AC diesel generator and associated switchgear to start the diesel and make the necessary electrical ties to the Unit No. 2 bus requires travel through the Unit No. 3 yard area. These actions will be performed by Unit No. 3 operators.

The outdoor access and egress route to the Unit No. 3 Alternate AC diesel generator and switchgear enclosures extends from the west entrance of Millstone Unit No. 3 Building 323 (grade elevation), north through a paved area to a service road, following the road generally to the east and then south to the enclosures.

NNECO proposes to credit the security lighting system for the access and egress route emergency lighting in lieu of an 8-hour battery power supply. The basis for this is as follows:

- the security lighting system illuminates the required access and egress routes;
- the security lighting power supply is backed by a security diesel generator with fuel storage capacity to ensure operation greater than or equal to 8 hours;
- the security generator, components and circuits are independent from the postulated fire areas which require access to the Unit No. 3 Alternate AC diesel generator and switchgear enclosure.

⁽⁴⁾ Elinor G. Adensam letter to Martin L. Bowling, Jr. "Exemption from the Requirements of 10 CFR Part 50, Appendix R – Millstone Nuclear Power Station, Unit No. 2 (TAC No. 2416)," dated March 16, 1999.

Consistent with the defense in depth approach to fire protection, portable lighting equipment is also available and can be relied upon in the event of a fire. There are portable lighting units dedicated for operations department use. The portable lighting equipment is administratively controlled and located inside the Millstone Unit No. 3 Control Building Complex.

Conclusion

The requested exemption is consistent with the requirements of 10 CFR 50.12 and should be granted. First, in accordance with 10 CFR 50.12(a)(1), the exemption requested by NNECO for Millstone Unit No. 2 is authorized by law, will not present an undue risk to public health and safety, and is consistent with the common defense and security.

- 1) Authorized by Law: Exemptions from Appendix R are authorized by law. This authority is confirmed by past Commission practice since the promulgation of Appendix R, under which the Commission has granted numerous exemptions from Appendix R requirements.
- 2) Will not present an undue risk to public health or safety: The proposed exemption from Appendix R requirements does not present an undue risk to public health and safety because an adequate level of fire protection is maintained. As demonstrated in the discussion above, the proposed alternate emergency lighting to be provided in the Millstone Unit No. 3 yard area satisfies the underlying purpose of the rule, which is to assure that plant shutdown can be accomplished in the event of a fire. As such, adequate protection of the public health and safety is provided.
- 3) Consistent with the common defense and security: Common defense and security issues are not implicated by this proposed exemption because no safeguards issues or equipment are affected by this request. The security system is not affected by this exemption. Rather, credit for specific aspects of the security system is being proposed.

Second, consistent with the requirements of 10 CFR 50.12(a)(2)(ii), special circumstances are present.

10 CFR 50.12(a)(2)(ii): Application of the regulation in the particular circumstances either would not serve the underlying purpose of the rule, or is not necessary to achieve the underlying purpose of the rule.

The purpose of Section III.J of Appendix R is to ensure that fixed lighting of sufficient duration and reliability is provided to allow operation of equipment required for post-fire, safe shutdown of the reactor. Lighting for access/egress associated with the equipment is also required.

It would not be practical to use battery powered units to illuminate large areas such as yards and roadways. Large area applications would impose electrical load requirements which are beyond the normal limits of battery units. The security lighting system illuminates the required access and egress routes. The power to the lighting system is backed by a security diesel generator with fuel storage capacity to ensure operation for greater than or equal to 8 hours. The security generator, components and circuits are independent from the postulated fire areas which require access to the Unit No. 3 Alternate AC diesel, or the Unit No. 2 Intake Structure or RWST pipe chase. Consistent with the defense in depth approach to fire protection, portable lighting equipment is available and can be relied upon for use in the event of a fire.

Based on these factors, NNECO requests an exemption from the requirements of 10 CFR 50, Appendix R, Section III.J, to the extent that the security lighting system shall be credited for access and egress route emergency lighting in lieu of providing 8-hour rated battery powered emergency lighting units for access and egress associated with operation of Unit No. 3 AAC diesel generator and switchgear.