

**NORTHEAST UTILITIES**

THE CONNECTICUT LIGHT AND POWER COMPANY  
WESTERN MASSACHUSETTS ELECTRIC COMPANY  
HOLYOKE WATER POWER COMPANY  
NORTHEAST UTILITIES SERVICE COMPANY  
NORTHEAST NUCLEAR ENERGY COMPANY

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July 1, 1987

Docket No. 50-336B12547

Re: 10CFR50, Appendix R

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Millstone Nuclear Power Station, Unit No. 2  
Comments on Appendix R Exemption

On April 15, 1986<sup>(1)</sup> the NRC staff exempted Millstone Nuclear Power Station Unit No. 2 from certain requirements of 10CFR Part 50, Appendix R Section III.G.2. This exemption and the associated safety evaluation report (SER) establishes the technical basis for complying with Appendix R and achieving safe shutdown in the event of a fire in any area.

On July 11, 1986<sup>(2)</sup> Northeast Nuclear Energy Company (NNECO) informed the NRC staff of NNECO's intention to revise the Millstone Unit No. 2 Appendix R safe shutdown process. This review resulted in changes to modifications listed in the April 15, 1986 exemption and SER. These modifications and their evaluations in accordance with Generic Letter 86-10 have been forwarded previously to the NRC staff.<sup>(3)(4)</sup> As part of this review, NNECO reviewed the April 15, 1986 exemptions and SER. This effort identified several minor items not identified previously<sup>(3)(4)</sup> which NNECO believes require further clarification by the NRC Staff. NNECO requests that the NRC Staff review the below provided comments and take action as necessary to ensure accuracy in docketed information.

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- (1) A. C. Thadani letter to J. F. Opeka, dated April 15, 1986, Subject: Appendix R Exemption Requests for Millstone Unit 2.
  - (2) J. F. Opeka letter to A. C. Thadani, dated July 11, 1986, Subject: Proposed Revisions to Appendix R Shutdown Process.
  - (3) E. J. Mrocza letter to U. S. Nuclear Regulatory Commission, dated April 16, 1987, Subject: Fire Protection.
  - (4) E. J. Mrocza letter to U. S. Nuclear Regulatory Commission, dated May 29, 1987, Subject: Fire Protection Evaluation: 10CFR50 Appendix R Compliance Review.
  - (5) E. J. Mrocza letter to U. S. Nuclear Regulatory Commission, dated May 29, 1987, Subject: Fire Protection.

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The scope of NNECO's comments embrace the following plant areas and topics in the Appendix R exemption and SER:

- (1) Cable Vault
- (2) Main Control Room
- (3) Charging Pump Room
- (4) Auxiliary Feedwater Pump Room
- (5) Safe Shutdown Method

The substance of NNECO's comments are discussed in each of the sections which follow:

#### Cable Vault

SER: page 8, second paragraph, Section 4.2

Summary: The SER states existing fire protection includes redundant fire detection systems in the cable vault.

Comment: There are two fire detection systems in the Cable Vault. However, these systems are not considered redundant since they are used for different areas of the cable vault fire area. NNECO proposes that the SER be revised to delete reference to the "redundant" fire detection systems.

#### Main Control Room

Exemption: page 9, third line from bottom

SER: page 11, third paragraph, Section 5.3

Summary: This exemption and one section of the SER provide that the control room is enclosed by complete reinforced concrete shielding walls and that all openings are protected by fire rated doors, dampers or penetration seals.

Comment: As noted elsewhere in the SER (SER, pg. 9, first paragraph under Section 5.2), the control room is a "room . . . bounded on three sides by reinforced concrete walls. The fourth side consists of a metal panel and glass wall which separates Unit 1 and Unit 2 control rooms. The floor and ceiling are of reinforced concrete." This is a more accurate description of the features surrounding the control room. NNECO proposes that page 9, third line from the bottom of the exemption and page 11, third paragraph of the SER which discuss the features of the control room be modified to be consistent with the description above.

Exemption: page 12, first paragraph

SER: page 13, first paragraph, Section 5.3

Summary: This exemption and this section of the SER states that the effects of a fire in the control room would not be serious enough to cause long term evacuation of the control room because of the limited fire hazards, continuous presence of control room operators, and "...the added fire protection proposed by the licensee, including an automatic fire suppression system in the main control console..."

Comment: In a letter dated January 31, 1985,<sup>(6)</sup> NNECO provided information to the NRC Staff to update and revise previously proposed modifications and exemptions. One of the major changes provided on page 4 of this letter was to withdraw the proposed modification installing a halon suppression system for the main control board. The need for a halon suppression system in the main control console, as explained in the January 31, 1985 letter, was no longer necessary and the modification was never implemented. NNECO proposes that the exemption and SER, as stated above, be modified to delete reference to a halon suppression system in the main control console.

#### Charging Pump Rooms

Exemption: page 14, 7th line from the bottom

SER: page 13, 5th line from the bottom

Summary: Both the exemption and the SER state that a single cable tray represents the only intervening combustible between charging pumps.

Comment: Although from drawings it appears that there is only one cable tray which would be considered an intervening combustible, NNECO has determined upon detailed inspections that there are several such cable trays. NNECO proposes that this exemption and SER be changed accordingly. Additionally, with more cable trays, there is an assumed increase in combustible material loading. A discussion of the loading is presented in the following paragraph.

SER: page 13, last line on page

Summary: The SER provides that in-situ combustible material represent a fire load of less than 3,000 BTU/ft<sup>2</sup>.

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(6) W. G. Council to D. G. Eisenhower, dated January 31, 1985, Subject: Information Supporting 10CFR50 Appendix R Review.

Comment: A more detailed compilation of in-situ combustibles was made assuming all cable trays are full and it was determined that the combustible loading for this area is 39,427 BTU/ft<sup>2</sup>. Although this appears to be a significant increase in combustible loading, it is more a change for Fire Hazards Analysis (FHA) purposes than a significant increase in actual combustibles. In the NNECO submittals upon which the SER is based, NNECO reviewed the area and found that there are several cable trays in this fire area, all of which were very lightly loaded. For the purpose of the initial analysis, an assumption was made that the several lightly loaded cable trays were equivalent to one fully loaded tray. In NNECO's revised FHA, NNECO assumed all cable trays in this fire area were fully loaded and also assumed one full change out of a lube oil as a transient combustible. Further, NNECO has wrapped the power feeds to the A and C charging pumps and the Z-2 power feed to the B charging pump with three-hour rated fire wrap. Other combustibles were identified, but the largest bulk of the increase was due to the conservative assumptions regarding full cable trays. NNECO maintains that the exemption from the technical requirements of Section III.G, to the extent that it requires the installation of a complete areawide automatic fire suppression system and separation between redundant shutdown divisions by more than 20 feet without intervening combustibles, remains valid and justified.

#### Auxiliary Feedwater Pump Room

Exemption: page 16, second line and second full paragraph.

SER: page 15, Section 7.2, second and fourth paragraphs  
page 15, Section 7.3, third paragraph

Summary: These sections provide that the auxiliary feedwater pump pit area is provided with a smoke detection system and that the only opening in the wall between the steam driven pump and the motor driven pumps is a heavy gauge steel watertight door.

Comment: As indicated in References (3) and (5), there is no smoke detection system in either the Motor-Driven Auxiliary Feedwater (MDAF) pump room or the Turbine Driven Auxiliary Feedwater (TDAF) pump room. Also, several pipe penetrations exist between the TDAF pump room and the MDAF pump room and between the TDAF pump room and the 14'6" elevation of the Turbine Building.

An evaluation provided in Reference (3) concludes that, although the above described variations from the SER descriptions exist, there is adequate separation between the TDAF pump room and adjacent fire areas.

U.S. Nuclear Regulatory Commission  
B12547/Page 5  
July 1, 1987

Safe Shutdown Method

SER: page 16, Section 8

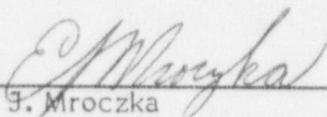
Summary: This section of the SER provides a description of the Staff's review of the safe shutdown capability of the plant.

Comment: In References (2) and (4), NNECO provided information of a revised safe shutdown method which NNECO believes is within the basis of the exemption. The SER should be revised to reflect NNECO's revised safe shutdown method.

We hope you find this information satisfactory and we remain available to answer any questions you may have.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

  
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E. J. Mroczka  
Senior Vice President

cc: W. T. Russell, Region I Administrator  
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 2  
T. Rebelowski, Resident Inspector, Millstone Unit Nos. 1 and 2