



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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DEC 27, 1978

✓ The Honorable William Proxmire
United States Senate
Washington, D. C. 20510

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Dear Senator Proxmire:

I am pleased to respond to you concerning a letter you received from George H. Ruiter dated October 31, 1978. In his letter, Mr. Ruiter questions the practicality and cost effectiveness of our regulations related to fire protection and security requirements. We believe, as discussed below, that our requirements are well founded and necessary for protection of the health and safety of the public.

I would like to address first our fire protection guidance. The need for additional guidance was recognized in 1975 as a result of a fire that occurred at the Browns Ferry Nuclear Plant. This fire damaged a substantial amount of electrical cables, disabling some safety related equipment. The fire revealed deficiencies in the fire protection capability for Browns Ferry and indicated potential deficiencies in other nuclear plants. The NRC, therefore, undertook a thorough study of the fire to determine the lessons to be learned and to provide recommendations needed to develop licensing guidance for both new plants and operating plants. This study resulted in the issuance of NUREG-0050, Recommendations Related to Browns Ferry Fire, a copy of which is attached for your information. This report which is the basis for our present regulatory guidance concerning fire protection, sets forth a defense-in-depth concept which emphasizes three echelons of defense against fires:

1. Preventing fires from getting started.
2. Detecting and extinguishing quickly such fires as do get started and limiting their damage.
3. Designing the plants to minimize the effect of fires on essential functions.

The report emphasizes that no one of these echelons can be perfect or complete and that it is their multiplicity, and the depth thus afforded, that provide a high degree of safety in spite of lack of perfection in any given system. The report also contains specific recommendations for fire prevention measures, fire detection and suppression methods, and means to protect essential functions from the effects of fires. The concept of defense-in-depth, and

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the specific recommendations were incorporated into the present staff fire protection guidance. This guidance is described in Regulatory Guide 1.120 (copy attached). This regulatory guide has been revised in consideration of public comments to eliminate some possible excessive and unrealistic requirements. These guidelines are used by the staff in its evaluation of the fire protection programs of each nuclear power plant. Requirements that may be unrealistic because of plant unique features are identified during these reviews, and alternative fire protection features have been approved. We believe that this approach results in a realistic and cost effective implementation of fire protection requirements.

A similar approach has been applied in the case of security requirements for nuclear power plants. Consistent with the assessment by the intelligence community of today's socio-political environment (i.e., the current threat of terrorism) the Nuclear Regulatory Commission published regulation 10 CFR 73.55 on February 24, 1977, requiring all power reactor licensees to upgrade their existing security plans and physical protection systems. The level of protection appropriate for nuclear power plants was established following a two-year period provided for comments on the proposed rule. Comments were solicited from our licensees and the general public. The NRC staff and their consultants believe that the resulting general performance requirements in 10 CFR 73.55 are necessary to protect the public health and safety by providing high assurance that radiological consequences to people will not occur as a result of sabotage at a nuclear power plant.

The ACRS has reviewed and supports staff and Commission programs in these areas. If I can be of further assistance, please let me know.

Sincerely,

(Signed) Lee V. Gossick

Lee V. Gossick
Executive Director
for Operations

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Enclosures:

1. Letter to Senator Proxmire from G. Ruter, 10-31-78
2. NUREG-0050, Recommendations Related to Browns Ferry Fire
3. Regulatory Guide 1.120, Fire Protection Guidelines for Nuclear Power Plants

REVISED 12-22-78 PER COMMISSION COMMENTS.
SEE PREVIOUS YELLOW FOR CONCURRENCES

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