



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

NRC PDR

July 26, 1979

Dr. W. L. Whittemore
Chairman, ANSI N17, and
Manager, TRIGA Reactors Facility
General Atomic Company
P. O. Box 81608
San Diego, California 92138

Dear Dr. Whittemore:

This is in response to your letter of April 23, 1979, to Mr. Stello regarding your particular concerns attendant with the implementation of the proposed "Safeguards Upgrade Rule" and your general comments with regard to proposed Regulatory Guide 2.6 (R.G. 2.6), "Emergency Planning for Research Reactors".

Your comments regarding the self-protection criterion at your facility are essentially correct as to the proposed "Safeguards Upgrade Rule" as currently written. As you are also aware, the self-protection criterion is currently a requirement of §73.6(b) and §73.47; and therefore, the NRC representatives you mentioned are correct in their statements that this criterion must be enforced. This would be true of any 10 CFR regulation. With regard to your contention that the existing self-protection criterion is arbitrary, it is intended to apply to theft of special nuclear material and not processing of such material. Although, your and Dr. Williamson's recommendation for a certain dose per unit material criterion is being studied, it is felt that for fuel with small quantities of contained special nuclear material, as is the case with TRIGA fuels, the fuel would not be self-protecting from theft. Once the material has been stolen, there are so many variables that could affect subsequent disposition of the material that it would be difficult, if not impossible, to develop a regulatory strategy to provide a reasonable assurance that no explosive device would result.

Regardless, we are reviewing the present "100 rem per hour at three feet" criterion with regard to its validity, effectiveness, and possible alternatives. The results of this study are forthcoming in the near future and could possibly result in changes to the regulations. As you are no doubt aware, Dr. Levine at Pennsylvania State University has submitted a petition for rulemaking on this subject. The results of the aforementioned study also will impact on any decisions on the action.

Your second item discussed the issuance for comments of proposed R.G. 2.6, "Emergency Planning for Research Reactors", and your particular comment with regard to the 100 KW level established by R.G. 2.6. First I would like to discuss some of the considerations we reviewed prior to publishing R.G. 2.6 for comments.

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In June 1975, ANS 15 established a working group tasked with developing, ANS-15.16 "Standard for Emergency Planning for Research Reactors". A draft standard was reviewed in 1976 by the NRC staff and a substantial number of comments were developed. These comments were forwarded with a N-17 ballot and reflected the staff's concern that the draft standard was in conflict with the requirements of Appendix E to 10 CFR Part 50, and was too general. As a result, the NRC ballot by N-17 was "not approved". As it appeared the NRC would not be able to endorse the standard and there was a need for emergency planning guidance, the staff started preparation of a regulatory guide. During 1977, several meetings were held by members of the ANS-15.16 working group and the staff to review each others draft documents and resolve differences. As a result, on February 13, 1978, N-17 voted to approve ANSI-15.16. However, the staff made the observation that while it no longer was in conflict with Appendix E to 10 CFR Part 50, it still did not provide the specificity considered necessary.

The draft regulatory guide, on the other hand, had the specificity considered necessary in such a document, and did not conflict with the ANS Standard, but only amplified it. The ANS-15.16 working group had expressed an opinion that the draft regulatory guide had many good points that should not be lost but that it provided more detail than was necessary. By late 1977, the development of the regulatory guide had neared completion and it did not appear wise to completely rewrite it to endorse the ANS Standard, particularly since the issue date of the standard was uncertain. The staff felt that publication of R.G. 2.6 for comment, while referencing ANS-15.16, would provide for wide distribution and comment thus permitting greater public participation in our deliberations. As to your comment regarding 100 KW, this power level was selected based upon known fission product inventories in relation to protective action guide levels which would suggest that planning was warranted.

Ultimately, after receiving all the comments, we plan to revise R.G. 2.6 to endorse ANS-15.16, including any additional staff guidance. The staff currently feels that additional guidance is necessary, especially for the higher risk facilities, as we do not believe, before reviewing any comments on the proposed R.G. 2.6, that the ANS Standard alone provides adequate guidance.

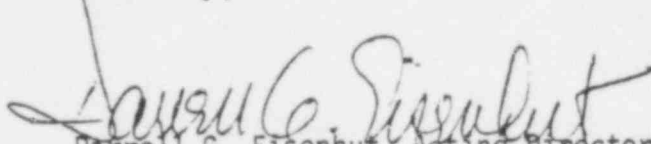
As you are also aware, we do require submission of an emergency plan as part of the application for license renewals. We are using a combination of ANS-15.16 and the proposed R.G. 2.6 as criteria for review of these plans to ensure fulfillment of Appendix E to 10 CFR Part 50. The ultimate criteria is Appendix E to 10 CFR Part 50 and ANS-15.16 and proposed R.G. 2.6 are only used as a guide for the licensees and reviewers.

Dr. W. L. Whittemore

-3-

If we can be of further assistance to you, please do not hesitate to call Steve L. Ramos at 301-492-7435.

Sincerely,

A handwritten signature in cursive script, appearing to read "Darrell G. Eisenhut". The signature is written in dark ink and is positioned above the typed name and title.

Darrell G. Eisenhut, Acting Director
Division of Operating Reactors
Office of Nuclear Reactor Regulation

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