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ATOMIC ENERGY DEVELOPMENTS

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STERLING 3-1495

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Mr. Harold L. Price, Director  
Licensing and Regulation Division  
U.S. Atomic Energy Commission  
Washington 25, D.C.

Dear Mr. Price:

We have reviewed the notice of proposed rule making (10 CFR Chapter 1, Power and Test Reactors) which was published in the Federal Register of May 23, 1959, and wish to make comments on it in response to the commission's invitation.

It is clear there is a need for guidance to be given power plant operators, engineers, reactor builders, and regulatory officials concerning the controlling principles of reactor plant site analysis, and concerning the evaluation of reactor hazards and protective measures to deal with them. It is equally clear that this is a very complex subject. Owing to the interrelation of potential hazards and engineering design measures to cope with them, a situation exists in which several solutions of varying degrees of acceptability can be found to the same general set of problems.

In these circumstances we believe the primary emphasis should be placed on meeting the need for guidance. Concurrently, it appears unwise to initiate any regulatory action which has, particularly at this early stage, the effect of freezing any aspects of design practice or site requirements. We believe this would be the inevitable effect of the proposed regulation, even though the few criteria expressed in the regulation are intended to be substantially hedged by qualifications and varying con-

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ditions. It is inevitable that with the issuance of such a regulation those regulatory officials in different jurisdictions who are unfamiliar with technical conditions related to nuclear reactor plants will seize upon the figures stated and consider them to have firmer significance than they are intended to possess.

It is important, furthermore, to emphasize in the minds of the public and the regulatory officials that the primary objective of such regulations is not to establish site isolation criteria, but rather to insure that the "performance" of a particular reactor installation is such as to keep the radiation exposure hazards to the public within the prescribed maximum permissible concentration standards.

The proposed regulation in effect takes an opposite approach to the problem. For example, requirements as to exclusion areas are stated in such a way as to make them appear an objective in themselves. The real objective, i.e., limiting off-site radiation exposures needs to be constantly stressed. If it appears essential to issue a regulation now, references to exclusion areas ought to be coupled with a recognition of the relationship between plant design, such as containment and shielding, and exclusion area requirements.

Rather than issue such a regulation at this time, however, it is urged that the following alternate courses of action be carefully considered:

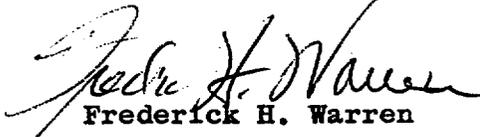
a. The Commission should see to it that, with the cooperation of industry, the engineering profession, and regulatory personnel, guidance materials are prepared dealing with the essential principles of reactor hazards analysis, reactor site evaluation and related technologies. Note that these guidance materials should deal with principles, and methods of analysis, and not with conclusions. They should be primarily designed to assist in the determination of proper engineering and scientific data and of methods of analysis and interpretation pertinent to reactor hazards evaluation.

b. After some period of time when more extensive experience on this subject is in hand, it would be

well to consider the issuance of a regulation expressing the intended effect of present reactor safeguards reviews. This would deal with insuring that the actual performance of a reactor plant will be to maintain the standards of radiation exposure to the public within stated limits for normal operation and for accidental emergency conditions.

We thoroughly appreciate the difficulties of the Commission in coping with these complex problems, and urge that every possible step be taken to avoid translating scientific and engineering design considerations into regulatory forms.

Yours very truly,



Frederick H. Warren