

June 27, 1977

D. W. Moeller, Chairman
Siting Evaluation Subcommittee

APPEAL BOARD VIEW OF PART 100 GUIDELINE DOSES

On May 11, 1977 Rags Muller sent the Committee a copy of a joint Seabrook-New England Power Project Appeal Board decision concluding that there is no need to formulate a plan for the possible evacuation or protection of the general public outside the established LPZ in the event of an accidental release of radioactivity at a large nuclear power plant.

This conclusion was based on a Board finding that, under the Commission's regulations in their current form "consideration is not to be given in licensing proceedings to the feasibility of discussing an emergency plan for the protection (in the event of an accident) of persons located outside of the Low Population Zone." The Board also said that if the Staff or any other parties to the case feel that there is a radiological health and safety consideration favoring a different result (which, the Board was at some pains to point out, was not a matter brought before them and about which they expressed no opinion) the proper remedy is to petition the Commission for a rulemaking proceeding.

Two concurring minority opinions were also attached, both of which favored certifying this question to the Commission on the basis that the Staff's support for consideration of evacuation of people beyond the LPZ must have been based on a conclusion that the Part 100 dose guidelines may no longer be considered to represent "acceptable" doses to members of the general public in an emergency although they must have been at one time. The Committee's letter on Seabrook is also quoted in this regard:

"The ACRS believes . . . that further attention needs to be given to evacuation of residents and transients in the vicinity even though they may be outside the LPZ."

Both the decision concerning the need for evacuation of people beyond the LPZ and the question of the interpretation of the Part 100 reference dose limits have now become the subjects of an inquiry to the Commission from the House Committee on Interior and Insular Affairs requesting separate opinions from the NRC and from the NRC's regulatory staff as to the need for attention to people outside the LPZ and as to the nature of the Part 100 guideline doses. This inquiry and a further exchange, which in effect delays a reply until the Commission has either itself addressed the issue or allowed the Appeal Board's decision to become

official, are attached.

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Thus, while no action is anticipated immediately in response to the "Udall Committee's" request, the Commission will probably have to make some reply eventually. In view of the connection between these considerations and reactor siting and emergency planning, you may wish to consider discussing this during a future Subcommittee meeting. If you would like to discuss this with the full Committee, time will be set aside during the 207th Meeting.

By way of additional background, the Appeal Board noted four separate decisions on this same matter between 1971 and this hearing (Point Beach, Midland, San Onofre 2 and 3, St. Lucie 2). In each of these cases, the Board involved concluded that, by the terms of Part 100, only the LPZ could be required to be "evacuatable." It is also noted that in the earliest of these cases (Point Beach) the Staff's opinion was that nothing in Part 100 required that populations outside the LPZ be considered; in the current cases, the Staff takes the opposite view of the same regulations.

It is not clear what the basis was for the Staff opinion cited by the Board in the earlier cases but a reading of TID-14844 (intended "to provide reference information and guidance on procedures and . . . assumptions whereby certain factors, pertinent to reactor siting as set forth in . . . (10 CFR 100) . . . may be used to calculate distance requirements for reactor sites . . .") suggests that the reference values set forth in Part 100 were never intended to be construed as acceptable doses for the general public. It states:

"The whole body dose of 25 rem referred to in the above excerpts from 10 CFR 100 corresponds numerically to the once in a lifetime accidental or emergency dose for radiation workers, which, according to NCRP recommendations, may be disregarded in the determination of their radiation exposure status. However, neither its use in the context of this regulation nor that of a correspondingly low internal organ dose (such as, for example, the 300 rem to the thyroid might be considered in this application) is intended to imply that these numbers constitute acceptable emergency doses to the public under accident conditions. Rather, this 25 rem value and the 300 rem thyroid value have been set forth in these guides as reference values which can be used in the evaluation of reactor sites for reactors that reflect through their design, construction and operation an exceedingly low probability for a major accident, and through location and other safeguards against the hazardous consequences of an accident, should one occur, a low probability of public damage from such accidents. These exposure

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values cannot be considered as being independent from the likelihood of serious accidents nor from considerations of the total number of persons that might be exposed."

In addition, the AEC Regulatory Staff did not initially interpret these doses as "acceptable" since there was a period when the Staff would not have considered a plant design acceptable if the Design Basis Accident Calculations actually approached the reference dose values of Part 100. In fact, a letter dated April 3, 1969 from Edwin A. Wiggin, Secretary to the Reactor Safety Steering Committee of the Atomic Industrial Forum to Dr. Peter Morris, then-Director of the AEC's Division of Reactor Licensing gives the following as examples of "inconsistencies" in AEC Construction Permit Application reviews:

"Although Part 100 was designed to apply to accident conditions, applicants are not expected to use its limits as a basis for design even under assumed accident conditions."

and

". . . the AEC insists on 10 CFR 100 directed TID-14844 calculations while at the same time insisting that 10 CFR 100 does not set limits on which the applicant can base his design. The applicant must design for much lower values against unspecified limits."

Please inform me if you would like any additional information or if you feel this matter should be scheduled for discussion at a Subcommittee or full Committee meeting.

/s/

M. W. Libarkin, Assistant Executive Director for Project Review

Attachments:

- 1) M. K. Udall ltr to M. A. Rowden dtd 5/24/77
- 2) P. L. Strauss ltr to M. K. Udall dtd 6/1/77
- 3) M. K. Udall ltr to P. L. Strauss dtd 6/7/77

cc: ACPS Members
 P. F. Fraley
 T. G. McCreless
 R. Muller

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