

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON 25, D. C.

December 13, 1961

Honorable Glenn T. Seaborg
Chairman
U. S. Atomic Energy Commission
Washington, D. C.

Subject: REACTOR SITE CRITERIA

Dear Dr. Seaborg:

At the Commission's request the Advisory Committee on Reactor Safeguards has frequently given assistance in developing and reviewing site criteria, which are intended to provide guidance to applicants and reactor designers. We have, during the past two years, sent several letters of advice on this matter. These are referenced below. At an Environmental Subcommittee Meeting on November 29, and at the thirty-eighth meeting of the ACRS, we conducted our most recent reviews of modifications to these criteria. The proposed revisions were made in the light of comments received after the publication of the guides in the Federal Register on February 11, 1961.

It is our belief that the identification of these criteria as guides rather than as regulations indicates the correct interpretation of the present state of reactor design, materials, and operating experience. We strongly support the deletion of the Appendix calculations in the guides and the issuance, instead, of a Technical Information Document which shows an applicant how to develop values for exclusion distance, low population zone, and population center distance. The Technical Information Document can be up-dated at intervals as experience and other data warrant.

The salient feature of these guides is the presentation of whole body and thyroid exposures which may be used for the purposes of design and site selection within the context of the criteria. The publication of such values represents a policy decision on the part of the Commission which makes these criteria meaningful.

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December 13, 1961

We recognize that these guides do have some arbitrary factors in them for the purpose of distance-dose calculation. For the present time the population center distance values provide what we believe are reasonable limits for potential exposures to large populations from the standpoint of design and site selection.

These guides also provide for the first time an approach for consideration of more than one reactor at a given location. They also stress the fact that they were developed for stationary power and testing reactors.

It is clear from these guides, that reactor safety must still be based on judgment. Judgment remains necessary for assessing the value of engineering safeguards, quality of materials, and competence of the reactor designer and operator.

It is the opinion of the ACRS that the revised criteria will be useful to the nuclear industry in identifying promising locations and other conditions involved in site selection. These guides should be considered as flexible and subject to revision at such intervals as experience in power and testing reactors requires.

Sincerely yours,

Sgd/T. J. THOMPSON

T. J. Thompson
Chairman

References:

1. Sept. 26, 1960, Silverman to McCone, "Criteria for Evaluation of Reactor Sites."
2. Oct. 22, 1960, Silverman to McCone, "Reactor Site Criteria."
3. Dec. 13, 1960, Silverman to McCone, "Site Criteria for Nuclear Reactors."