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UNITED STATES GOVERNMENT

Memorandum

File

TO : Harold Price, Director
Division of Licensing and Regulation

DATE: February 6, 1961

FROM : Duncan Clark, Director (Dc by m-h)
Office of Public Information

SUBJECT: PUBLIC ANNOUNCEMENT OF REACTOR SITE CRITERIA GUIDES

OPI:JF

Attached for your approval and/or comment is a public announcement concerning the proposed reactor site criteria guides which were approved by the Commission for issuance for public comment in staff paper AEC 2/25.

By copy of this memorandum we also seek concurrence of the Division of Reactor Development, the Division of Biology and Medicine and the Office of the General Counsel.

Because the Commission has already approved the paper and preparations are being made for publication in the Federal Register at an early date, we ask you to telephone your comments to Joseph Fouchard of our staff by noon, Tuesday, February 7.

Attachment

cc:Dr. Pittman, DRD (attn: Ernest Hall)
Dr. Dunham, B&M
Robert Lowenstein, OGC

2/6/61 Press release looks OK to H.P.
Hope to send thing to F.R. today which means it will probably be published tomorrow or the next day.
Gave above message to Mr. Fouchard and he called H.P.

dcm

A1/216

AEC ISSUES REACTOR SITE CRITERIA GUIDES
FOR PUBLIC COMMENT

The Atomic Energy Commission has issued for public comment a "Notice of Proposed Guides" concerning criteria to be used in guiding the Commission in consideration of sites for nuclear power and test reactors to be licensed. The criteria define guidelines upon which suitability of any proposed reactor site will be judged by AEC.

An applicant for a permit to construct a nuclear power or test reactor is required to submit in support of his application a reactor safeguards report which includes a description of the important characteristics of the site proposed for the reactor. Although the data required are spelled out in Part 50 of Commission regulations, there is no indication of how these data will be evaluated by AEC, or the specific criteria which will guide the Commission in evaluating the suitability of the site which has been proposed.

For this reason, the Commission has developed the proposed guides so that industry, state and local officials, and the general public will be familiar with the factors which are considered by the Commission in judging proposed sites for reactors. The guides are being issued for public comment before final consideration by the Commission.

The objective of these guides and of all Commission activities involving reactor licensing and operation is to keep the exposure to radiation of individuals at a minimum in the event, however unlikely, that an accident should occur with a reactor.

The guides were developed by the Commission in consultation with the

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statutory Advisory Committee on Reactor Safeguards and are primarily applicable to reactors on which operational experience has been gained. However, they may be applied, with greater conservatism, to reactors which are novel in design, unproven as prototypes and for which there is not extensive theoretical and experimental data or pilot plant experience. More isolated sites would be required for these reactors than for well proven types. It is essential that all reactors be carefully and competently designed, constructed, operated and inspected.

Site approval or disapproval is given after review and evaluation of the design of the reactor and its proposed location. The evaluation is made both by the Commission's Division of Licensing and Regulation and the Advisory Committee on Reactor Safeguards.

The Commission recognizes that the process of reactor hazard analysis and site selection in the present state of technology is not a precise science. This is because exact values cannot be assigned to some of the complex variables involved.

There is rather general agreement among the experts, however, that the probability of a major accident in reactor plants as we know them today is exceedingly small. This is due both to the inherently safe features of reactors and to the safeguards that have been engineered into the plants as a part of a deliberate and planned effort to insure safety.

Since it is not possible now to define site criteria with enough exactness to eliminate the need for a certain amount of judgment on the part of AEC's expert evaluators, the proposed guides are designed primarily to identify a number of factors considered by the Commission and the general criteria which are used as guides. These factors are:

1. Population deasity in the area surrounding the proposed site, and the uses which are made of this area, such as industrial, farming or

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residential uses.

2. Physical characteristics of the site, including seismology, meteorology, geology and hydrology.

3. Characteristics of the proposed reactor, including maximum power level; use of the facility; extent to which the design of the reactor incorporates well proven engineering standards; and the extent to which the reactor incorporates unique or unusual features which have a significant bearing on the probability or consequences of an accident.

In considering the population density factor, three distances are established for a reactor of any given power level. They are:

(A) Exclusion area, which is the area surrounding the reactor ~~to which access~~ access to the area is under the full control of the reactor owner. Residence within this area normally would be prohibited. If residence is permitted, it must be possible to move these persons quickly in order to minimize hazard.

(B) Low population zone, the area immediately surrounding the exclusion area. In this area the number of residents must be small enough so that they could be evacuated or other protective measures taken in the event of a serious accident.

(C) Population center distance, which is the distance from the reactor to the nearest boundary of a densely populated center containing more than about 25,000 residents.

Distances which can be used as an initial estimate of the exclusion area, low population zone and population center distance for hypothetical reactors are contained in the table in Appendix A of the attached criteria.

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The Commission stresses that these distances would be used only as a beginning point for evaluation of a proposed site. The distances can be adjusted either upward or downward from those in the table, depending upon the physical characteristics of the site and the characteristics of the reactor. All these factors are considered in determining whether or not a proposed reactor at any specific site would create an undue hazard to the health and safety of the public.

The "Notice of Proposed Guides" will be published in the Federal Register on _____. All interested persons who desire to submit written comments or suggestions should send them to the Secretary, U. S. Atomic Energy Commission, Washington 25, D. C., Attention: Director, Division of Licensing and Regulation, within 120 days after publication in the Federal Register.

The proposed criteria guides are attached.

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Attachment