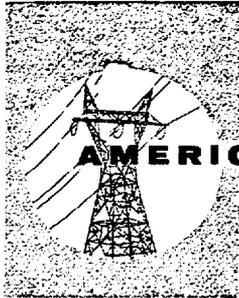


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AMERICAN PUBLIC POWER ASSOCIATION

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June 22, 1959

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- Washington Public Utility Districts' Assn.
- Wisconsin Municipal Utilities Assn.

U. S. Atomic Energy Commission
Washington 25, D. C.

Attention: Division of Licensing and Regulation

Gentlemen:

In response to the Commission's general invitation, we should like to submit for your consideration certain comments on the "Notice of Proposed Rule Making" published in the Federal Register on May 23, 1959 in regard to an amendment to Commission regulations to establish criteria for the evaluation of proposed sites for nuclear power and test reactors.

In respect to the Commission's statement setting forth the factors considered in site evaluation for power and test reactors, our principal concern is with paragraph c., which relates to "Population Density in Surrounding Areas". A Commission regulation incorporating the language in this paragraph could result in restricting the use of nuclear power stations to a relatively few large utility systems in this country. It could delimit very seriously the generation of nuclear power by municipally owned electric utilities and other utilities serving areas of limited size. Inasmuch as a major portion of the membership of this Association is comprised of municipally owned systems, the possibility that such a regulation might be adopted gives us serious concern.

The language in the Commission notice to which I refer reads as follows:

"Population Density in Surrounding Areas. Power and test reactors should be so located that the population density in surrounding areas, outside the exclusion zone, is small. It is usually desirable that the reactor should be several miles distant from the nearest town or city and for large reactors a distance of 10 to 20 miles from large cities..."
(underlining added)

Without intending to question the accuracy of this paragraph as a description of criteria which the Commission has been and is applying in the evaluation of reactor sites, although the Commission has approved several notable exceptions to this general rule, we

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do urge that it not be formalized in a Commission regulation. To do so would probably mean that the "usually desirable" condition would become the rule. It certainly would encourage the general public to look askance at any large reactor proposed for location closer than 10 miles to "the nearest town or city" and at any power or test reactor of any size which was proposed to be built less than "several miles" away from population.

If the policy is established that distances of these magnitudes usually should separate nuclear power stations from all towns and cities, the utilization of nuclear energy for power generation will be ruled out for most of the municipally owned utility systems in this country. Most municipal systems locate their generating plants within the city limits or adjacent thereto for reasons of economy and, sometimes, because of specific legal requirements.

A second reason for not incorporating these specific distance requirements in a regulation is the fact that some cities actually include large uninhabited areas within their limits and/or have unusual topography and climatic conditions which would make it unreasonable or inappropriate to apply the distance requirements cited in the proposed rule.

Obviously, this Association supports any nuclear safety requirements which are necessary and would not advocate policies in respect to municipal power reactors which would entail risks to the public health and safety. However, the proposed Commission criteria of paragraph c. seem too sweeping and too categorical.

It has been our understanding that it is possible to design and contain power reactors so that it is safe to build them less distant from towns and cities than indicated by the proposed standard. As a matter of fact, the Commission only recently has reaffirmed its approval of the construction permit for the 100,000 kilowatt fast breeder power reactor of the Power Reactor Development Company, which I assume falls in the category of a "large" reactor. This plant is located within 7.5 miles of the city of Monroe, with a population in excess of 20,000, and within five miles of resorts which in the summer have a total population of about 4,000 people. I believe that the Commission approvals of the NASA testing reactor site and of the 11,400 kilowatt power reactor site near the City of Piqua also represent exceptions to the general rule expressed in paragraph c. These examples indicate that with appropriate reactor design and containment measures the Commission believes it is possible safely to build power reactors in locations less isolated than suggested by the language of paragraph c.

It would seem inappropriate, therefore, for a regulation to prescribe rather specific distances from population as "usually desirable". What is a desirable or necessary degree of isolation would seem to depend to an important degree upon the specifics of reactor design and containment and other site conditions in each case.

The proposed standard not only would exclude the generation of nuclear power by most municipal systems but also could limit severely the use of nuclear

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power in the U.S. generally. Paragraph c. "usually" would require large areas in which little population could be allowed. Thus, if "several miles" means on the average about four miles, even small power and test reactors would need to be surrounded by an area of 50 square miles in which no town or city is located or allowed to develop.

For large reactors, a radial distance of 10-20 miles from large cities would be "usually desirable", meaning an area of about 300 to 1200 square miles per reactor in which no large cities should exist or develop.

The economic cost of precluding settlement of areas of this general magnitude would be very large and so it seems evident that establishment of the proposed criteria in the form of a Commission regulation could limit severely the utilization of nuclear power in the United States.

As I have stated, it certainly could preclude nuclear generation by most of the municipally owned systems in the United States.

In addition, the criteria would seem to limit drastically if not preclude the use of reactors to produce steam for industrial processing and space heating. Logically, the use of nuclear power for naval vessels and merchant ships also would be severely handicapped by the establishment of the suggested criteria. Presumably, a power reactor on a ship should be kept several miles from any town or city, and 10 to 20 miles from any large city, if a stationary plant should be so located.

We recognize that nuclear power technology is still in a highly developmental stage and that until there has been substantial operating experience with power reactors of various sizes and types, the Commission must be conservative in evaluating the safety of sites and reactor designs. These comments are not intended to imply an opinion that the Commission has been unduly conservative to date, but to suggest that the present case-by-case approach is the most suitable, at the present time, for what is still a developing technology.

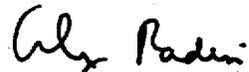
In view of the present state of knowledge, the complexities of the problem and the variety of combinations of reactor designs and site conditions which can exist, it would be our recommendation that the Commission issue only broad and general guiding principles in respect to site safety factors at the present time, and continue to evaluate each proposed reactor and site on a case-by-case basis. It is certainly to be hoped that through this process the Commission will be able gradually to develop reasonably specific general standards and codes for reactor safety some time before economic power reactors are developed, as such guidance will be needed by the utility industry in its planning and operations.

With respect to the case-by-case approach, the experience of some of our member systems indicates that early preliminary evaluation by AEC of a proposed reactor site would be most advisable, rather than postponing such evaluation until plans for a project are well advanced.

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Finally, we would urge that in the development of standards, the Commission give careful consideration to their possible impact on the various types of utility systems in the United States, in addition to assuring that they meet the indisputable need for protecting the public health and safety.

Sincerely,



Alex Radin

AR/jb