

2082-9

August 21, 1959

From: Mr. James E. Tribble  
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To: U.S. Atomic Energy Commission  
 Washington 25, D.C.  
 Attention: Division of Licensing  
 and Regulation

Subject: Request for Comments on Proposed Site Criteria for  
 Power and Test Reactors

Reference (a) Federal Register, Vol. 24, No. 101, May 23, 1959 -  
 10 CFR Chapter 1, Power and Test Reactors, Notice of  
 Proposed Rule Making

1. In response to the Commission's request for comments on the subject criteria, the following suggestions are respectfully submitted.

2. Reference (a) indicates that definitive criteria for the evaluation of sites for power and test reactors have not been set forth to date because of the complex nature of the environment, the wide variation in environmental conditions, the variations in reactor characteristics, and variations in protection that can be engineered into a reactor facility. These factors have become no less variable due to recent developments. Definitive criteria of the type proposed in Reference (a) are still likely to place severe and often unwarranted restrictions on certain facilities.

3. This is particularly apparent with regard to mobile reactors. Criteria of the type included in Reference (a) virtually eliminate economical nuclear-powered ships. These ships would be required to enter populated harbors, and may tie up within a few hundred feet of residential areas. An exclusion distance of one-half mile from unrestricted areas and ten to twenty miles from large cities (Reference (a)) is completely impractical.

4. It is true that safety should not be compromised to avoid economic penalties. But it is the opinion of the undersigned that adequate safeguards can be provided aboard a nuclear ship to permit its entrance into populated harbors under nuclear power. This will naturally require more precautions than would be necessary in a land-based plant, located far from centers of population.

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 Comments to*

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5. Typical of such precautions are the following:

- (1) Collision protection will be required.
- (2) Additional shielding around the container may be necessary for the accident condition.
- (3) A very elaborate containment system may be needed to reduce radioactive leakage to acceptable levels following an accident.

But all of these precautions can be taken. In addition, a nuclear ship can be towed away from populated areas if an accident occurs. This freedom of movement is not available to land based plants. Evacuation of dockside areas is also a possibility; such an evacuation should be no more of a problem than that which would take place if a major fire broke out.

6. The criteria proposed in Reference (a) may also be burdensome in certain land-based applications. Space heating for installations in or near a large city is one example.

7. In short, definitive site criteria are impractical. It should be the responsibility of the Commission to evaluate each design on its own merits rather than impose overly restrictive requirements on all plants.

  
J. E. Tribble