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NORMANDY 3-1511, EXT. 774

Mr. Harold L. Price, Director
Division of Licensing and Regulation
U. S. Atomic Energy Commission
Washington 25, D. C.

Dear Mr. Price:

The following constitutes my comments on the proposed safety factors published in the Federal Register on May 23, 1959, as a possible basis for reactor site criteria.

Two major deficiencies in the Commission's present practice and procedure for dealing with reactor sites have not been met by this issuance. I mention these deficiencies at the outset because I believe that they are more important in assuring protection of the interest of the public and the industry than the establishment of criteria. This is not to suggest that criteria should not be established, only that these other matters should be resolved at the same time, if not sooner.

A. Procedural deficiencies

The deficiencies to which I refer relate to the stage in the development of a reactor project when the AEC evaluates the site and the role of the states.

1. Under the Commission's present rules, no clear requirement is set forth as to the time when a reactor project must be submitted for its review. Despite the imposition by Congress of a dual licensing procedure for reactor projects, namely the requirement of a construction permit and an operating license, the Commission has never stated the amount of site preparation and reactor construction which can be undertaken prior to application for or issuance of a construction permit.

Obviously, the very concept of requiring a construction permit can be frustrated if the applicant is permitted to expend considerable funds on the project before seeking the permit. The pressure for issuance of the permit, in some

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form or other, will be substantial if a large monetary outlay has already occurred.

A clear requirement of obtaining approval by the AEC prior to expenditure of funds either on the reactor or on the site is quite important if the factor of site selection is to be given any real weight. The kinds of criteria that can be set for reactor site selection are at best very vague. This is clearly indicated by your criteria published on May 23rd. Despite the considerable time and effort which has obviously gone into the development of the criteria, no fixed requirements are set forth. It is recognized that each of the factors including exclusion area and population density beyond the exclusion area are only established as guides subject to change because of the safety characteristic of the particular facility. While I cannot quarrel with the practical reasons for such an approach, I would suggest that the nub of the problem in reactor location is to attempt in each case to avoid the selection of a marginally poor site. This problem cannot be met by the establishment of flexible factors. In fact the necessary flexibility of such factors merely reinforces the applicant's position where he attempts to offset the weaknesses of a particular site by building additional safeguards into the facility. Experience has established that in the marginal situation the applicant keeps adding safety devices until he has crossed the exceedingly hazy line of acceptable risk.

The solution to minimizing the selection of marginal sites as a practical matter lies in considering the site before any significant financial commitment has been made in the site. The applicant under this proposal would be required to discuss his site with the Commission before any significant site preparation had commenced and preferably before the site is purchased. To protect the applicant from the adverse economic effect of announcing his site before buying the land or any part thereof, such discussion would have to be held on a confidential basis. Because of the confidential nature of the procedure and the public's right to be heard, no firm commitment could or should be made by the Agency but at least a letter expressing the Agency's views could be written.

One obvious problem in proceeding to consider site at this very early stage in the reactor project is the fact that the applicant may not be prepared to discuss the hazards of the

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facility in any detail. The facility may still be in a preliminary design stage. This dilemma of assuring protection of public safety and not impeding the time schedule for nuclear power plants is one the Commission presently faces in the issuance of construction permits. The answer is not to allow the applicant to spend substantial amounts on construction of the facility prior to submitting application to the AEC. Nor is the answer to require completion of final design of the facility and analysis of the hazards prior to permitting any construction. Rather, the Commission must take the kind and extent of unknowns into account in reaching its preliminary judgment on location of the facility. Concededly, this is a difficult task. In many cases, the Commission could only advise the applicant that the site is marginally good or marginally poor.

The solution suggested will not preclude the selection of marginally poor sites since the applicant is entitled to move as close to the line of acceptable risk as he desires. Obviously, he is entitled as a legal matter to have the safety of his facility tested against a fixed criteria or set of criteria, and he only needs to meet such criteria.

As a practical matter, however, this solution should result in the selection of safer sites. Where an applicant is told that his site has some serious disadvantages and may not be adequate, he is unlikely to risk going ahead with the particular site where he is not yet financially committed to the site. On the other hand, where the applicant has made significant expenditures on the site, as in the case of the Sandusky reactor and others, he is more likely to add safety devices to attempt to offset any disabilities of the site. Moreover, even those in the AEC charged with reviewing the safety of the facility are more likely to be willing to express their serious reservations on a site where financial commitments have not been made.

By adoption of the suggested solution, not only will the public obtain greater protection of its interest but the applicants will obtain greater protection for their investment.

2. A second important matter of procedure on which the issuance is silent and which should be resolved rapidly is the role of the states. As I understand the situation, the states at present only get written notice of reactor

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license applications and proceedings thereon. Discussions with the interested state or states normally is not initiated by the AEC licensing group. The state, of course, is able to request discussion with the AEC staff and can enter any proceeding either formally or informally.

The weakness in this procedure is twofold. First, the state is notified in many instances after significant financial commitments are made on the proposed site. This, of course, is one aspect of the problem just discussed. Second, the initiative would appear to lie with the AEC since they are the body with ultimate responsibility as well as the know-how in the business of reactor safety analysis. While the states in many instances have not properly communicated their interest or views, the Commission is equally at fault for not encouraging and, more importantly, not providing a good mechanism for state participation. Moreover, the states have competence with regard to the environment of sites located within their borders of which the Commission should want to take advantage.

I would recommend that the Commission automatically invite appropriate state officials to participate in reactor licensing procedures at the earliest point and particularly to discuss the safety of the site selected and to determine whether the site disrupts any aspect of local planning. In this way, the Commission can take advantage of expertness within the state and permit the states to play a significant role in light of their legitimate interests in reactor location.

The failure to act on this matter may lead to the unfortunate adoption of legislation granting a right of veto to the states over reactor site approval by the AEC. As you are aware, such a proposal has been suggested recently to the Joint Committee on Atomic Energy. Granting the states a veto power would subject the applicant to a dual reactor safety evaluation procedure and might in a particular case require litigation at the federal and state levels. This would appear to be an indefensible burden. In addition, the states have no expertness in the field of reactor safety. They would either have to obtain such advice and unnecessarily deplete our limited scientific and technical manpower or they would be totally unable to exercise such a responsibility.

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B. Factors proposed

As to the factors proposed in the May 23rd announcement, I have several comments. Generally, I think that the approach is a good one. While more precise criteria are desirable, I have difficulty believing that the establishment of fixed requirements for reactor sites is feasible in view of the interrelationship between site and the particular reactor and the lack of standardization of reactors.

1. In line with this general observation, it is possible that fixing numbers on exclusion area and distance from population centers may be a mistake. Even though these distances are intended only as general guides, the burden on the applicant to support lesser distances as a practical matter may be almost insuperable. Where the complexities and lack of operating experience is as great as it is in the reactor field, a natural tendency exists to substitute arbitrary concepts for judgment on an ad hoc basis. Such an effect could be unnecessarily injurious to industrial progress in reactor development. If acceptable exposure levels are clearly set forth and site evaluation earlier in the planning of each facility is made, I would think that all interests would be better met than by the establishment of distances which by their nature must be somewhat arbitrary.

2. I believe that some explanation of the exclusion distance in par. 6 and the distance from dense population areas in par. C should be set forth. Without such explanation, it is impossible to comment on the figures suggested.

3. No mention is made of acceptable levels of exposure at the site boundary or the nearest point of human traffic outside of the exclusion area. I would think that such levels could be established both for normal operation and possibly even for the worst believable accident. The establishment of such levels would lend more precision to the regulatory criteria than the present vague concept of not creating an undue risk to the health and safety of the public.

Sincerely yours,

Lee M. Hyman