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NRC PROPOSES REVISIONS TO REACTOR SITING REGULATIONS

The Nuclear Regulatory Commission is proposing to amend its requirements governing the siting of nuclear power plants to decouple siting issues from those associated with reactor design and to take into account advancements in the earth sciences and earthquake engineering as they apply to the siting of nuclear power plants.

As proposed, the revisions would:

(a) for future nuclear power plants, eliminate the requirements to postulate accident source terms (calculations on the amount of radioactivity that would be available for release to the environment in the event of an accident) and for the use of dose calculations (potential radiation exposures to members of the public); these requirements would be retained for existing nuclear power plants and non-power reactors;

(b) require a minimum exclusion area (the area surrounding a nuclear power plant where the licensee has complete control over any and all activities and usually there are no residents) of 0.4 miles;

(c) establish population density criteria for use in assessing the suitability of future nuclear power plant sites; as proposed, the population density at the time of initial site approval should not exceed 500 people per square mile averaged over any radial distance out to 30 miles and 40 years after initial site approval should not exceed 1000 people per square mile out to a radial distance of 30 miles; if these population densities were exceeded, consideration of alternative sites would be required, but they would not constitute upper limits of acceptability because severe accident risk considerations show that low risk can be achieved for sites having significantly higher population densities.

(d) require that reviews of applications for early site approvals take into account important factors such as population distribution, topography and transportation routes in order to determine where there are any site characteristics that could

pose a significant impediment to the development of an offsite emergency plan such as limitations of access or egress in the immediate vicinity of the proposed site; and

(e) update the seismic siting and engineering criteria for new nuclear power plants to benefit from the rapid advancement in the state of the art of earth sciences and the experience gained in the application of the procedures and methods used in the current regulation.

The criteria which govern the siting of existing nuclear power plants were issued in 1962 and require an exclusion area, a low-population zone where protective actions can be taken and that the size of the exclusion area be determined by postulating the accidental release into the reactor containment of a large amount of radioactive materials and that the resulting doses to hypothetical individuals--one at the closest point to the nuclear power plant of the exclusion area boundary and the other at the outer radius of the low population zone--be within specified limits.

In 1976, the Public Interest Research Group (PIRG) filed a petition for rulemaking asking the Commission to establish minimum exclusion area and low population zone distances and population density limits. The following year, Free Environment, Inc., and others filed a petition for rulemaking requesting, among other things, that the Commission require that the central Iowa nuclear project and other reactors be sited at least 40 miles from major population centers.

In response, the Commission, in 1978, directed its staff to develop a policy statement on nuclear power plant siting and a resulting report "Report of the Siting Policy Task Force" was issued in 1979 and provided the staff's recommendations. In July 1980, the Commission issued an Advanced Notice of Proposed Rulemaking regarding the staff's recommendations and seeking public comments on the matter. The proposed rulemaking was deferred the following year, however, to await development of the Safety Goal and improved research on accident source term.

Public comments on these proposed amendments to Parts 50, 52 and 100 of the Commission's regulations should be received by February 18, 1993. They should be addressed to the Secretary of the Commission, Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Service Branch.

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