



ENTERGY

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(57 FR 47802)

Entergy Operations, Inc.

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John R. McGaha

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March 23, 1993

Mr. Samuel J. Chilk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

ATTENTION: Docketing and Service Branch

Subject: Entergy Operations Comment on Proposed Rulemaking to 10 CFR Parts 50, 52, and 100, "Reactor Siting Criteria"

Reference: 57 Federal Register 47802 - October 20, 1992, and 55601 - November 25, 1992

CNRO-93/00016

Dear Mr. Chilk:

The referenced Federal Registers requested comments on the subject proposed rulemaking. Entergy Operations, Inc., the licensee for Arkansas Nuclear One, Grand Gulf Nuclear Station, and Waterford 3 Steam Electric Station wishes to offer the following:

Entergy Operations participated in the development of comments being submitted by NUMARC and endorses those comments on this proposed rule. In addition to those comments, we wish to emphasize some points on the proposed rule where it deals with non-seismic siting criteria.

We recommend that radiological dose consequence evaluation factors contained in the current 10 CFR 100 be retained as the key determinants for site suitability. There does not appear to be adequate technical justification for arbitrarily mandating the proposed minimum exclusion area size and population density. We believe the proposed change has the potential for significant negative impact to both currently licensed and future plants without appreciable improvement to public health and safety.

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Entergy Operations Comments on Proposed Rulemaking to 10 CFR Parts 50, 52, and 100,  
"Reactor Siting Criteria"

CNRO-93/00016

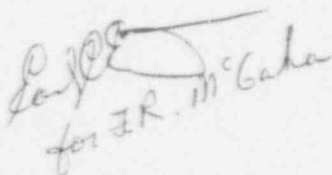
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A petition to incorporate minimum exclusion area and low population zone distances and population density limits into the regulations has been denied once by the NRC (53 FR 50232) on the basis that it unnecessarily restricted NRC's regulatory siting policies without resulting in a substantial increase in the overall protection of the public health and safety. We concur with the basis of that denial. The background for this proposed rule states the NRC is proceeding because of "possible renewed interest." While there is much interest in reactor siting, adoption of the proposed criteria may adversely affect public perception as to the acceptable safety of existing plant sites. Additionally, it could lead to disqualifying a significant number of existing sites as well as new sites from hosting additional or new nuclear reactors apart from any demonstrable safety consideration. Detailed comments and responses to the NRC questions are included in the attachment.

In summary, we believe the criteria contained in the current Part 100, has been and remains appropriate for providing the appropriate protection of public health and safety. Therefore, we respectfully request the NRC to reconsider proposed non-seismic rule.

Sincerely,



*J. R. McGaha*  
for J. R. McGaha

JRM/baa  
attachment

cc:

Mr. R. P. Barkhurst  
Mr. R. F. Burski  
Mr. W. T. Cottle  
Mr. J. G. Dewease

Mr. J. J. Fisicaro  
Mr. W. K. Hughey  
Mr. L. W. Laughlin  
Mr. M. J. Meisner

Mr. J. W. Yelverton  
Corporate File [ 8 ]  
DCC (ANO)  
Records Center (W-3)  
Central File (GGNS)

**Entergy Operations Comment on Proposed Rulemaking (Non-Seismic)  
to 10 CFR Parts 50, 52, & 100**

**General**

We recommend that radiological dose consequence evaluation factors contained in the current 10 CFR 100 be retained as the key determinants for site suitability. There does not appear to be adequate technical justification for arbitrarily mandating the proposed minimum exclusion area size and population density.

The proposed codification of population density and minimum exclusion areas size for siting future nuclear power plants does not appear to have any inherent appreciable improvement to public health and safety. However, it could have a negative impact by possibly resulting in the inappropriate disqualification of a more favorable site in preference to a site that is less desirable overall but meeting population density and minimum exclusion areas size requirements. Further, this could lead to negative public perception regarding the safety of existing plants as well as impacting construction of future units at an existing site. Finally, we believe the proposed codification of population density and minimum exclusion areas could send an inappropriate message regarding the safety risk associated with advanced light water reactor designs in general.

The proposed rule codifies very conservative numeric criteria for population density and minimum exclusion areas size as key indicators of site suitability regarding offsite radiation dose risk with negligible improvement in protection of public health and safety despite extensive siting experience to date that demonstrated current requirements provide very conservative criteria for site suitability. Based on the industry study *Evaluation of Population Distribution Relative to Meeting the Quantitative Health Objectives of the NRC Safety Goal Policy for Offsite Risk Associated with Nuclear Power Plants*, we believe the proposed rule would be unnecessarily restrictive and is contrary to the intent of the NRC's Safety Goal Policy.

**NRC Questions**

**Question 1:**

Should the Commission grandfather existing reactor sites having an exclusion area distance less than 0.4 miles for the possible placement of additional units, if those sites are found suitable from safety consideration?

**Response:**

The fact that existing sites have been evaluated for suitability from safety consideration apart from the proposed exclusion area and found acceptable is indicative of the problem with this proposed rule. The proposed basis for determining site suitability restricts NRC flexibility unnecessarily

with no appreciable increase in public health or safety. The key factors for determining site suitability for additional units at an existing site or evaluating new sites are the radiological dose consequence evaluation factors in the current 10 CFR 100. Dual siting safety standards are inappropriate and should be discouraged.

**Question 2:**

Should the exclusion area distance be smaller than 0.4 miles (640 meters) for plants having reactor power levels significantly less than 3800 Megawatts (thermal) and should the exclusion area distance be allowed to vary according to power level with a minimum value (for example, 0.25 miles or 400 meters)?

**Response:**

The appropriate method for determining the exclusion area distance should be determined based on radiological dose consequence evaluation contained in the current 10 CFR 100. Exclusion area distances less than the 0.4 miles proposed have been found by the NRC to be adequate for the protection of public health and safety for approximately one third of the currently licensed operating sites. The flexibility to choose a site based on all factors relating to public health and safety as is currently the case should be maintained.

**Question 3:**

The Commission proposed to codify the population density guidelines in Regulatory Guide 4.7 which states that the population density should not exceed 500 people per square mile out to a distance of 30 miles at the time of site approval and 1000 people per square mile 40 years thereafter. Comments are specifically requested on question 3A, 3B, and 3C given below.

**Question 3A:**

Should numerical values of population density appear in the regulation or should the regulation provide merely general guidance, with numerical values provided in a regulatory guide?

**Response:**

Since population density limits are not key determinants of offsite radiological dose risk, they provide essentially no beneficial contribution to the protection of public health and safety regarding offsite radiological dose risk beyond the immediate area adjacent to the power plant. However, in general, regulations should provide regulatory requirements with specific suggested guidance in regulatory guides. In this manner, licensees maintain the flexibility to use alternative NRC approved methods to meet the requirements of a rule.

**Question 3B:**

Assuming numerical values are to be codified, are the values of 500 persons per square mile at the time of site approval and 1000 persons per square mile 40 years thereafter appropriate? If not, what other numerical values should be codified and what is the basis for their values?

**Response:**

We do not believe there is adequate technical basis for mandating **any** minimal numerical criteria apart from its clear link to offsite radiological dose risk and a commensurate benefit to public health and safety. Further, we are not aware of any accurate method to predict population density, growth, and distribution for a period of forty years into the future.

**Question 3C:**

Should population density criteria be specified out to a distance other than 30 miles (50 km), for example, 20 miles (32 km)? If a different distance is recommended, what is its basis?

**Response:**

See our response to Question 3B above.

**Question 4:**

Should the Commission approve sites that exceed the proposed population values of 10 CFR 100.21 and if so, under what conditions?

**Response:**

The key determinant for site suitability is by using the current radiological dose consequence evaluation factors. See our response to Question 3B above.

**Question 5:**

Should holders of early site permits, construction permits, and operation license permits be required to periodically report changes in potential offsite hazards (for example, every five years within 5 miles)? If so, what regulatory purpose would such reporting requirements serve?

**Response:**

Such a reporting requirement for operation licensees (OL) would be redundant to reporting requirements of 10 CFR 50.71(e), and as such would not be necessary or appropriate. For early site permits (ESP) or construction permits (CP), there is no regulatory purpose for periodically

reporting changes in potential offsite hazards since there are no public health and safety effects due to construction or siting. The proper time to consider such changes would be when the NRC grants an OL or a combined operating license (COL). Since there are effective regulatory requirements in place, we believe this redundant reporting requirement would present an unnecessary burden on both NRC and licensee resources. Further, this would not be consistent with the purpose of the Paperwork Reduction Act of 1980.

**Question 6:**

What continuing regulatory significance should the safety requirements in 10 CFR 100 have after granting the initial operation license or combined operation license under 10 CFR 52?

**Response:**

10 CFR 100 Reactor Site Criteria should remain a regulation for evaluation of the suitability of proposed sites. As such, it should not have any continuing regulatory significance beyond the issuance of site permits or siting portion of combined operation licenses. Construction and operational safety requirements are adequately addressed on other parts of the Commission's regulations (e.g. 10 CFR 50).

**Question 7:**

Are there certain site meteorological conditions that should preclude the siting of a nuclear power plant? If so, what are the conditions that can not be adequately compensated for by design features?

**Response:**

We are not aware of any meteorological conditions that can not be adequately compensated for by design features. As such, Regulatory Guide 1.145 should be revised to delete the requirement to collect one year of meteorological data since this data is not needed for determination of site suitability.

Meteorological investigations to characterize remaining severe weather phenomena for potential applicability and conservative Chi/Q values can be achieved using information that is readily available rather than by collecting site specific meteorological data for an entire year.

**Question 8:**

In the description of the disposition of the recommendations for the Siting Policy Task forces report (NUREG-0625), it was noted that the Commission was not adopting every element of each recommendation. Are there compelling reasons to reconsider any recommendations not adopted and, if so, what are the bases for reconsideration?

**Response:**

We believe the elements of this report have been adequately addressed.

**Additional Comments for Clarification of Appendix Q**

Proposed revision to 10 CFR 52, Appendix Q provides an applicant for renewal of an early site permit "is subject to a full early site permit review." This proposed revision is inconsistent with the current 10 CFR 52, Section 52.31 as well as Subpart A of part 52. Additionally, this provision does not appear to be applicable for an early site permit renewal because an early site permit holder seeking renewal would be per Section 52.29 and 52.31 rather than seeking a separate review by NRC staff on site suitability under Appendix Q.

We recommend the proposed change be deleted based upon the above since it would serve only to undermine the stability and predictability of the siting process.