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September 9, 1996

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Subject: Federal Emergency Management Agency Draft Document: Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants (Criteria for Emergency Planning in an Early Site Application), Federal Register Vol. 61, No. 94, May 14, 1996

Dear Mr. Meyer:

The Illinois Department of Nuclear Safety (IDNS) hereby submits its comments on the above-referenced draft document. IDNS is the lead agency in Illinois, in cooperation with the Illinois Emergency Management Agency, for preparing emergency plans for, and coordinating emergency responses to, accidents at nuclear power plants.

Overall, the proposed Early Site Permit (ESP) application criteria outlined in the draft document (NUREG-0654, Supplement 2) appear sound and relatively straightforward. There are two areas in which clarification might improve the document.

1. The introduction of Supplement 2 should contain language clearly stating that it is the intent of the NRC and FEMA that assignment of responsibility for the development and maintenance of the specific emergency response capabilities outlined under each Planning Standard shall be consistent with State laws and jurisdictions.

Jurisdictional and legal authority varies considerably throughout the country, and what is a state responsibility in one state may be a county or municipal



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responsibility in another. Designation of the authority to recommend or order an evacuation, to close schools, embargo food, etc., can be a significant factor in determining the effectiveness of an emergency response plan. The NRC should recognize under the ESP process that the failure to reconcile jurisdictional issues prior to site approval or the start of construction virtually ensures that such issues will pose a potential impediment to final licensing.

2. There is a potential contradiction in Section II, Early Site Permits-Identification of Physical Characteristics, referencing the use of evacuation time estimates (ETEs). At the outset of this section, under "A. Evacuation Time Estimate Analysis," the draft criteria suggest that an ETE "is an emergency planning tool that can be used" (emphasis added) in the ESP process, and then goes on to cite the ETE development guidance in NUREG-0654, Appendix 4, and NUREG/CR-4831. However, both cited documents, as well as the narrative in the draft criteria, require expensive, time-consuming surveys and computer projections aimed at determining optimum evacuation times. Undertaking such an ETE analysis using the recommended methodology during the ESP process will produce exactly what the NRC, in CLI-86-13, 24 NRC (1986), said was not required.

Moreover, the existing ETE methodology is flawed in a number of areas. For example, it produces results that are applicable only to the immediate time frame in which the study is initially conducted, and provides no consideration for future growth and development within and adjacent to the defined EPZ. Growth rates of as little as 5 per cent over a 2-5 year period in population, development, density, and other demographic factors can significantly affect road network traffic loads and the numbers of transport-dependent persons. Basing an ESP decision on an ETE that is developed more than five years before it is likely to be a factor in emergency protective actions is not as meaningful as examining the major elements and capabilities that are required to execute a successful evacuation.

Since the objective in the ESP process is to identify any obvious physical characteristics that "could pose a significant impediment to development of emergency plans," such preliminary determinations can be made based on existing state and local highway planning information, past disaster response efforts, experiences of local emergency response organizations, and interviews with local residents. This approach is at least as accurate in estimating traffic loads and travel times as the results of many of the computer models available, and can be done quickly and at far less cost.

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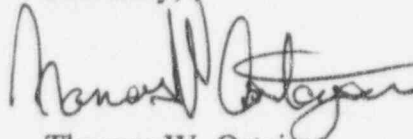
Furthermore, there are no empirical data to support the contention that ETEs truly represent the means by which an evacuation will be carried out under actual emergency conditions. In fact, experience during natural disasters and circumstances hypothesized during emergency plan exercises frequently demonstrate that predetermined evacuation scenarios must be modified to fit the particular conditions existing at the time of the evacuation. In short, ETE assumptions are often ignored in favor of current information about population distribution and prevailing road and weather conditions.

Finally, in light of the NRC's position that the appropriateness of an ETE duration is made on a site-by-site basis; i.e., the absence of a standard of what constitutes a minimum evacuation time and a definition of what would be an "unduly high" ETE, the development of an ETE as part of the ESP process is unwarranted.

The proposed Criteria J.3, J.4.h, and J.4.k should be modified to require only that state and local authorities attest that existing modes of egress from the EPZ pose no significant impediment to orderly evacuation.

Other than these two areas, IDNS believes that the proposed Supplement 2 reflects the planning standards of NUREG-0654, appropriately modified for the ESP phase. We appreciate the opportunity to comment on this draft guidance. If you have any questions or concerns regarding our comments, please do not hesitate to contact me or Roy Wight, Manager, Office of Nuclear Facility Safety.

Sincerely,



Thomas W. Ortiger  
Director

TWO:ec

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