



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 14, 1983

NOTE TO: James H. Sniezek, Deputy Director
Office of Inspection and Enforcement

FROM: Brian K. Grimes, Deputy Director
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SUBJECT: RATIONALE FOR NOT SPECIFYING ACCEPTABLE EVACUATION TIMES

The NRC Regulations do not specify any acceptable upper limit for estimated evacuation times for the plume exposed Emergency Planning Zones around nuclear power plants. One reason for this is that even the best emergency preparedness cannot assure that severe health effects or even fatalities will not occur for the worst case accidents. There is always some accident that can be postulated where actions for the public could not be taken fast enough to avoid fatalities, although such events would be of extremely low likelihood. A finding that evacuations can be carried out in a particular length of time does not therefore provide assurance that health effects will not be incurred or even that health effects will be minimized in any particular case. In a severe event, the best course of action to minimize health effects may well be sheltering rather than evacuation. The time taken to make protective action and to communicate with the public, which is specified as a goal in our regulations, is therefore more important than a calculated evacuation time which is necessarily highly dependent on the assumptions made as to weather and time of day.

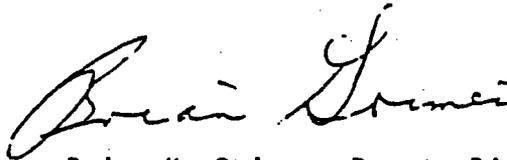
Another reason for not specifying acceptable maximum evacuation times is that under certain conditions (blizzards, floods, earthquakes) evacuations may not be feasible or desirable. Various gradations of such conditions or other circumstances which could be postulated for particular sites make evacuation times not specifically predictable in advance within wide margins.

One other possible use of an upper limit for estimated evacuation times would be its use as a siting tool prior to the granting of a construction permit. The conclusion of the joint NRC/EPA task force that addressed this point was that the current guidance on population density for nuclear power plant sites in use by the NRC is adequate to generally assure that evacuation is a feasible option under normal weather conditions.

While the NRC does not regulate power plant operation or siting through the use of maximum allowable evacuation times, the NRC does require that evacuation time estimates be made for two reasons. First, during the process of

making the estimates, any situations requiring special attention during the planning process can be identified. For example, by providing traffic controls at particular intersections, evacuation times can be substantially reduced by minimizing the queues formed at these intersections, thus providing an optimum use of available resources.

Second, during the course of an accident, evacuation time estimates made in advance for various conditions can provide decisionmakers an important tool to make decisions on the most appropriate protective action (evacuation, sheltering, or sheltering followed by later relocation) to minimize exposures to the population.



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