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NRC PUBLIC DOCUMENT ROOM

August 6, 1979

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DOCKET NUMBER

PETITION RULE PRM-50-23 (44FR32486)

Secretary of the Commission
 U. S. Nuclear Regulatory Commission
 Washington, D. C. 20555



ATTENTION: Docketing and Service Section

Dear Sir:

Commonwealth Edison Company hereby submits comments in respect of the petition for rulemaking filed by Critical Mass Energy Project, et al. as published in the Federal Reporter on June 6, 1979. 44 Fed. Reg. 32486. Commonwealth Edison owns and operates seven nuclear units at three sites in northern Illinois and presently holds construction permits for six additional units. As a result, Commonwealth Edison has substantial experience in developing and co-ordinating radiological emergency response plans.

The Critical Mass petition is little more than a restatement of demands considered and rejected by the Commission in denying a petition for rulemaking filed by Public Interest Research Group ("PIRG") and others in 1977. See 42 Fed. Reg. 36326 (July 14, 1977). Petitioners attempt to justify their renewed demands by reference to public apprehension caused by the recent accident at Three Mile Island. Commonwealth Edison believes that lessons can be learned from Three Mile Island, but the improvements in emergency preparedness which need to be made are not those identified by petitioners. We further believe that such improvements can best be identified and implemented through the expedited rulemaking recently announced by the NRC. 44 Fed. Reg. 41483 (July 17, 1979). Accordingly Commonwealth Edison requests that the petition of Critical Mass et al. be denied.

The Critical Mass petition contains a list of demands which on their face show an unprofessional approach to emergency planning. For example, the petition demands that public evacuation drills be conducted at least annually to a distance of thirty miles. As the Commission observed in rejecting a similar suggestion in 1977, "[T]here are potential costs in terms of deaths and injuries to the public associated with evacuation drills." 42 Fed. Reg. 36327. The petitioners attack the probabilistic techniques used by the Commission to compare the risks from the evacuation

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drills to the risks from a potential reactor accident. Yet they do not controvert the reality such risks exist or provide their own estimate of the relative hazard. We find it disturbing that petitioners, who profess to represent the public interest, are willing to recommend evacuation drills, but give no consideration at all to the inevitable risks to the public that such evacuation drills would involve.

Further, the Critical Mass petition arbitrarily adopts 50 miles as the limit for which evacuation should be planned around nuclear facilities. This represents an increase of 10 miles over the distance suggested in the earlier PIRG petition. In support of this 50 mile limit, the Critical Mass petition refers to several figures describing the off-site radiological consequences of a hypothetical core-melt accident found in a recent NRC/EPA report, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in support of Light Water Nuclear Power Plants," NUREG-0396 (December 1978). Ironically, these figures are based on probability estimates from the Reactor Safety Study (Wash. 1400). Apparently petitioners are willing to selectively endorse this methodology when the results support their position, yet they criticize the Commission for relying on WASH-1400 in comparing the relative risks of evacuation drills and nuclear power plant accidents. Petitioners are similarly selective in their use of the NRC/EPA report, NUREG-0396, which actually recommended a 10 mile evacuation planning zone, rather than the 50 mile zone they distill from its pages.^{1/}

The Critical Mass petition reflects the mistaken assumption implicit in the earlier PIRG petition that effective emergency planning requires supplying the public with detailed advance instructions, including escape routes. As the Commission observed in 1977:

[T]he specific action to be taken in any instance must be evaluated and based upon the best information available at that time and such actions must be centrally coordinated to assure that they are not mutually counter-productive. For example, the egress patterns

^{1/} Commonwealth Edison does not entirely agree with the 10 mile evacuation zone, 50 mile ingestion pathway emergency planning zones recommended by NUREG-0396. However, we will submit detailed comments on that subject and others in response to the proposed rulemaking announced by the NRC on July 17, 1979. 44 Fed. Reg. 41483.

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selected by the emergency coordinator could become congested if occupants that are not in the downwind sector evacuate and merge with the downwind sector evacuees. Wide dissemination of detailed complex plans could result in increased unnecessary casualties caused by misinterpretation of complex and variable conditions in terms of the nature of the release and effect of meteorological conditions.

42 Fed. Reg. at 36327. It is not necessarily inappropriate to provide to the public in the locality of nuclear power plants some concise description of emergency response plans. However, the indiscriminate barrage of detailed information called for by the Critical Mass petition would be excessive, confusing and counterproductive.

One new suggestion made in the Critical Mass petition is that licensees maintain offsite radiological monitoring programs which can establish the cumulative doses to the public from accidental releases with an error of less than 30% for the most exposed section of the public within 10 miles of the plant and less than 50% for those within 50 miles of the plant. Commonwealth Edison agrees that some improvements in offsite radiological monitoring may be suggested by the experience gained at Three Mile Island. However, the acceptance criteria proposed by Critical Mass are arbitrary and unreasonable, since they require extremely speculative predictions concerning the movement of the public in relation to the radiation monitoring devices. For emergency response planning all that is required is reliable information as to the path and intensity of any unplanned radioactive release. From this information, population dose histories can rapidly be projected. Population doses need not be measured directly, as apparently suggested by the Critical Mass petition.

The Critical Mass petition also demands that a determination be made that there will be emergency protection of the public in the event of large radiation releases as a prerequisite to NRC site approval, and that no construction permit be issued until a coordinated off-site emergency response plan has been formulated, tested and demonstrated to be effective. This ignores the fact that the public is already protected by the extensive review of site characteristics, design features of nuclear facilities, and

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population densities which is undertaken early in the licensing process. Further, as the NRC has already recognized in proposed 10 CFR Part 50, Appendix E, the appropriate time to consider emergency planning is at the operating license stage, prior to start-up of the nuclear facilities. There is no point in insisting that an off-site emergency plan be tested at the construction permit stage, six or seven years before radioactive materials ever arrive at the site.

The Critical Mass petition also demands that off-site emergency plans be developed and tested (including evacuation drills) for all existing plants within six months or existing plants will be derated or shut down. Commonwealth Edison has already stated its opposition to public evacuation drills. As for the suggestion that continued reactor operations be tied to improvements in off-site emergency planning, a similar proposal is currently pending in the United States Congress, and it may be inappropriate for the NRC to adopt or reject such a proposal pending a Congressional mandate. We would like to point out, however, that the Governor of the State of Illinois has recently made a commitment to develop by January, 1980 an off-site emergency plan which will merit NRC concurrence. We think that the State of Illinois should be given a reasonable chance to fulfill this commitment without the imposition of an arbitrary six month deadline.

Finally, Commonwealth Edison would like to respond to the bases for the Critical Mass petition set forth at 44 Fed. Reg. 32487. In our view, the primary lesson to be learned from the Three Mile Island accident is not that evacuation is an essential safeguard of public health and safety, or that public evacuation drills are a necessity. The EPA protective action guides for evacuation were never exceeded during the accident, and the State of Pennsylvania emergency planners performed in a very professional manner. Similarly, we do not agree with the Critical Mass petition that radiation monitoring in the three days after the Three Mile Island accident was "sporadic." According to one Commonwealth Edison employee who participated in immediate post-accident recovery operations, the Department of Energy sent a team of experts who developed substantial information on off-site radiation levels. The difficulty during the first few days was that information concerning emergency response capabilities and radioactive releases was not transmitted promptly to the appropriate decision makers. Indeed the lack of adequate communications and information management is one of the most important lessons to be learned from Three Mile Island.

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Commonwealth Edison requests the Commission reject the Critical Mass petition in favor of the more reasoned, expert approach to emergency planning outlined in its Federal Register notice of July 17, 1979.

Respectfully submitted,

Byron Lee
Vice President

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