UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
METROPOLITAN EDISON COMPANY, et al.	)	Docket No. 50-320
	)	
(Three Mile Island Nuclear Station, Unit 2)	)	

FORMAL DEMAND FOR AN ADJUDICATORY HEARING
PRIOR TO VENTING GASES FROM
THREE MILE ISLAND UNIT 2

Now comes Steven Sholly and Donald E. Hossler and formally demand that they be granted a full adjudicatory hearing on the amendment of the TMI-2 Operating License issued by the Nuclear Regulatory Commission on June 12, 1980 and published on June 17, 1980. The Petitioners also formally demand that no venting of the radioactive atmosphere from TMI-2 be allowed until the completion of this demanded hearing.

In support of this demand, the Petitioners assert as follows:

1. The Petitioner, Steven Sholly of Mechanicsburg, Pennsylvania resides about 15 miles form the Three Mile Island Unit 2 nuclear reactor (hereinafter TMI-2), works about 12 miles distant from TMI-2 and frequently travels in the course of his work within one mile of TMI-2. Petitioner, Donald Hossler represents People Against Nuclear Energy as that organization's President. People Against Nuclear Energy represents citizens of the Middletown area, the majority of whom live within five miles of Three Mile Island. Any order permitting the venting of radioactive materials into the atmosphere from TMI-2 may affect the interests which the petitioners have in living in an environment free of the health hazards of low level radiation. The petitioners have the requisite knowledge and experience suitable to qualify them to be admitted as parties to any

hearing concerning the venting of radioactive materials from TMI-2. Petitioners have been recognized as intervenors in Three Mile Island Unit One Restart Proceedings, NRC Docket No. 50-289.

2. The Nuclear Regulatory Commission entered, on June 12, 1980, two orders in Docket No. 50-320. These orders were made on the basis of an NRC Staff Report NUREG-0662, but without prior public hearing at which persons whose interests could be affected might become a party.

3. The first of the orders, entitled "Memorandum and Order" approves the purging of radioactive gases and particulates from the Three Mile Island reactor containment building into the ambient air.

4. The "Memorandum and Order" explains that the reason for purging these radioactive materials is to protect workers, who may go into the containment building for maintenance, cleanup, and information gathering, from contamination and the hazards of working in awkward protective clothing. The principal reason for workers to enter the containment building, according to this Order, is eventual core defueling.

5. The NRC Order supports its position that defueling is an urgent priority on the basis of a "potential risk to public health and safety" (p.5). However, the Union of Concerned Scientists' Report to the Governor of Pennsylvania dated May 15, 1980, titled "Decontamination of Krypton-85 from Three Mile Island Nuclear Plant" concludes that

> none of the concerns expressed by Met Ed and NRC have sufficient merit to justify their proposed schedule. Furthermore, we have identified no other concerns that would support a conclusion that prompt entry in the short time they propose is needed.
>
> The UCS study group concludes that taking additional time to develop an alternative course of action to the Met Ed/NRC venting proposal is justifiable...Such a course would not pose an undue risk to the health and safety of the public. (p.18).

The UCS finds that the possibility of an emergency is remote and that a

delay of one to one and one-half years would be justified. In the face of these conclusions in a report relied upon by the NRC Order (p.5), the NRC finding of "potential risk" is inadequate justification, without more, to warrant going forward with venting without adherence to the statutory requirements for notice and hearing.

6. The NRC Order states that NUREG-0662, the NRC staff report,

> contains ample evidence to show that risk to physical health from the proposed purge or from any of the alternative decontamination methods considered by the staff would be negligible.

It may be conceded that the NRC staff have made a prima facie case, based on one interpretation of the scientific evidence, that the hazards of venting will be negligible. However, the NRC was formally presented with the findings of the Institute for Energy and Environmental Research, Heidelberg, in a report dated June 12, 1980 titled "Radiation Exposure Due to Venting TMI-2 Reactor Building Atmosphere." This report concludes that,

> for the radiation exposure caused by the release of Kr 85, the induction of one additional cancer case (probably skin cancer) cannot be excluded. Genetic effects are also expected and are normally assumed to be as frequent as somatic effects. (p.13)

The "Heidelberg study", a summary of which was available to the NRC at its June 5, 1980 hearing, also investigated three of the 70 other nuclides in the containment atmosphere and concluded that with a 99% efficient filtering system,

> three additional cancer cases could result from the release of the three radionuclides considered. In addition, an equivalent amount of genetic damage is estimated. (p.6)

Therefore, ample evidence from reliable and independent scientific sources has been presented to the NRC which shows that the health effects of venting the TMI-2 containment building would not be negligible, but on

the contrary, highly significant - the illness and possible death, and genetic mutation, of living and unborn human beings.

7. It is the proper function of hearing procedures to provide a forum at which such competing evidence can be discerned and weighed and made the basis of a decision which will take all of the available evidence and factors into consideration. The NRC is now in the position of acting on the basis of the presentation of only one side of the case. The one-sidedness of the information upon which the NRC has acted is revealed in the following finding included in the NRC Order:

> After mixing with the atmosphere [Krypton-85] does not threaten the public health and safety. (p.5, n.3).

Numerous studies on low level radiation, including the specific findings of the Heidelberg study, have established that any release of radiation of the magnitude of that contemplated by the NRC Order "threatens" injury to the health of humans through numerous possible pathways. The actual incidence of human illnesses and mutations resulting from specific instances of atmospheric degradation from radioactive sources is a subject of ongoing epidemiological research. But to state flatly as the NRC does that there is no "threat" of injury is to simply reveal the lack of appreciation for a body of evidence which is relevant to the NRC Order but which has not been taken into account by the NRC. The function of the hearing required by statute is to assure that such information be presented and taken into account in the agency decision making process.

8. The dangers of low level radiation specifically elaborated in the Heidelberg study have been recognized in the fundamental regulatory norm set out in 10 CFR Part 20 "Standards for Protection Against Radiation". This Part 20 is the foundation for the protection of the public against radiation hazards and its essential purpose and basic norm is set forth

in 10 CFR §20.1(c), that persons engaged in activities under licenses from the NRC must,

> make every reasonable effort to maintain radiation exposures, and releases of radioactive materials in effluents to unrestricted areas, as low as is reasonably achievable.

This fundamental norm, aimed at preventing the gradual and unnecessary degradation of the atmosphere through tolerance of engineering standards which fall short of those which are reasonably achievable, is implemented in 10 CFR 50.34a and 50.36a. These provisions apply to normal reactor operations, not the cleanup of a reactor after a partial meltdown. Nevertheless, the decision to vent radioactive particulates and gases into the atmosphere incidental to a cleanup operation would be subject to the same general "as low as reasonably achievable" (ALARA) norm as would apply to an operating reactor.

That the emissions fall within the technical specifications provided for an operating reactor does not in itself establish compliance with the ALARA norm. Accordingly, the NRC must give full attention to the reasonable alternatives to venting, rather than assume that since one view of the evidence indicates that venting will cause negligible or insignificant health effects the venting may thus go forward. ALARA requires implementation of the techniques that are reasonably available. The Union of Concerned Scientists' report, relied upon by the NRC, expressly states:

> We recommend evaluation and public discussion of the two UCS venting proposals, each of which would yield a markedly decreased ground-level radiation exposure.

These proposals were not adopted by the NRC. The report also states with regard to the issue of releases:

> We recommend reevaluation and public discussion of the two krypton recovery proposals previously rejected by

> the NRC and Met Ed: cryogenic processing and selective absorption. Because each recovery method has potential for implementation within one year, either one might prove the technique of choice in ridding the containment building of Kr-85. (p.57)

Accordingly, reliable technical opinion exists that alternative means are available which would reasonably meet the ALARA norm by minimizing both exposures and releases. The NRC Order dismisses these alternatives with the comment that none of them could be accomplished "much short of a year", and consequently concludes that reducing the health risks do not justify delay. This finding conflicts squarely with the finding of the UCS report. The NRC has failed to make anything more than conclusory statements concerning the considerations that must enter into an application of the ALARA norm to the TMI-2 operations. It has failed either to analyze in detail the actual delay that the alternative methods of decontaminating the TMI-2 reactor containment atmosphere would occasion or to analyze the basis for concluding that the need for venting is so urgent that the NRC cannot take the time to explore these alternatives through the hearing process that is normally required prior to making such a rule dealing with the activities of a licensee.

9. In support of its Order the NRC refers to the testimony of its expert consultants who argued that venting the radioactive materials into the atmosphere would, by reducing the uncertainty about the plant, reduce the stress which the people living nearby TMI-2 will suffer. (p.4) The NRC Order does not mention that these same experts at the same June 5, 1980, hearing stated that the delay of action for another 2 to 3 months would not affect the stress of these neighbors of TMI-2. Nor is it clear from their findings that the selection of some other method for removing the radioactive materials other than venting them into the atmosphere would not reduce the stress on these persons even further. The NRC Order suggests that it is uncertainty that is causing the stress. This

uncertainty could be removed by making any reasonably supportable ruling after the issues have been fully considered in a public hearing. Even the NRC itself in its Order has pinpointed the principle concern with regard to stress, i.e. that a plan be chosen "which rests on a very wide consensus that physical health is not threatened by the krypton release". (p.9) The plan in fact chosen by the NRC is directly in conflict with the scientific consensus that it is the least desirable of all the alternatives. The UCS states that the release should be done by a different method which would reduce exposures, while the Heidelberg study leads to the conclusion that release of these radioactive materials into the atmosphere should be avoided althogether by using one of the alternatives to venting. By failing to hold a hearing on these issues and make a good faith effort in the sunshine of a public forum to fully explore methods upon which a consensus of scientific opinion might be reached, the NRC has deliberately chosen a procedure for proceeding that is designed to aggravate rather than alleviate the stress upon the unfortunate neighbors of Metropolitan Edison's TMI-2 facility.

In any event, the NRC has correctly concluded that it has "no special competence in this field" (p.9) and should have also avoided the impression that it is attempting to base its Order on the benefits it might confer by reducing the psychological stress suffered by persons exposed to the radiation emissions it will authorize. The decision must be justified under the ALARA norm and the hard evidence of what can be reasonably achieved in minimizing the release of radioactive materials into the atmosphere not on soft social science data concerning how a public uninformed by open hearings on the issue might "feel" about different alternatives.

10. Section 189 of the Atomic Energy Act requires that at the request of any person whose interest may be affected, a hearing must be held in any proceeding for amending any license or for issuing or modifying rules or regulations dealing with the activities of licensees. A decision by the NRC not to apply the ALARA standard to the cleanup operations of a nuclear reactor which has suffered a partial meltdown would be a modification of the general rule stated in 10 CFR 20.1(c) and therefore be subject to the Section 189 hearing requirement.

11. In a separate document docketed with the above mentioned NRC Order, also dated June 12, 1980, titled "Order for Temporary Modification of License" (hereinafter "Amendment Order") the NRC approved the amendment of Section 2.1.2 of the Appendix B technical specifications attached as a condition of the Facility Operating License No. DPR-73 (the TMI-2 License). This amendment suspends the limits on release of radioactive materials from TMI-2, which limits were imposed under 10 CFR Part 50 to enforce compliance with the ALARA norm. The NRC substitutes for these ALARA release limits, a standard maximum dosage for a hypothetical exposed individual which will rely upon a complex sampling system for enforcement. This Amendment Order is an action for which a Section 189 hearing is available as a matter of statutory right.

12. The Amendment Order states that the relevant license provision is "amended, effective immediately". (p.4) Under Section 189 where a request is not made for a hearing the NRC may dispense with the requirement that 30 days notice precede an amendment "upon a determination by the Commission that the amendment involves no significant hazards consideration." (emphasis added) The NRC has made this finding (p.3).

Where a request for a hearing is made, there is no comparable statutory provision for making the license amendment immediately effective. 10 CFR 2.204 provides that an amendment order may be made effective

immediately against the licensee when the Commission finds that "the public health, safety or interest so requires". The NRC has not made a finding that the public health, safety and interest requires the immediate effectiveness of the Amendment Order. But even if the NRC had made such a finding, where a hearing has been requested by a person whose interest may be affected - as is the case now - neither this regulation nor the statute allows an order to be made immediately effective prior to the requested hearing.

Pursuant to the foregoing considerations the petitioners herein,

1. State that they represent persons whose interests may be affected by the proceeding to grant a license amendment to permit venting radioactive materials from the TMI-2 containment without a hearing.

2. Request that a Section 189, Atomic Energy Act, public adjudicatory hearing be held on the issue of whether venting radioactive materials from TMI-2 may be done consistently with the "as low as reasonably achievable" (ALARA) norm for reactor effluents, whether the Order permitting venting should be enforced, and whether the Amendment Order should be entered.

3. Petition that they be granted leave to participate in such hearing as intervenors.

4. Request that the hearing be held immediately on an emergency basis and in any event prior to acting on the Order permitting venting, or enforcing the Amendment Order, now planned for June 28, 1980.

5. Request that prior to the effectiveness of any final order permitting the venting of radioactive materials from the Three Mile Island containment atmosphere into the ambient air,

a. the NRC secure from qualified scientists current air samples

from the containment atmosphere and an analysis of the present composition and radioactivity levels of all of the 71 radionuclides present in the containment atmosphere in amounts exceeding one curie;

b. the findings from this analysis be discussed with residents of the TMI vicinity and their representatives at a public hearing;

c. the following experts be permitted to testify and be examined by the TMI residents and their representatives as well as the NRC on the following issues:

(1) Bernd Franke and other experts from the Institute for Energy and Environmental Research, Heidelberg, FRG, about the contents of their scientific study, dated June 12, 1980, entitled "Radiation Exposure Due to Venting TMI-2 Reactor Building Atmosphere".

(2) Jan Beyea, of the Union of Concerned Scientists about the view of the Union of Concerned Scientists regarding the probable health consequences and hazards considerations resulting from the atmospheric venting authorized by the NRC's June 12, 1980 Amendment Order.

(3) James Leas, of the Union of Concerned Scientists, about the views of the Union of Concerned Scientists regarding the alternative proposals for recovery of the radioactive gases in the containment atmosphere rather than venting them into the ambient air and the practicality of these proposals for compliance with the ALARA norm for reactor effluents.

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