

June 9, 2000

The Honorable Tom Harkin  
United States Senate  
Washington, D.C. 20510

Dear Senator Harkin:

I am responding to your letter of April 10, 2000, supporting NRC funding of State stockpiles of potassium iodide (KI) in communities near nuclear power plants. The Commission is currently considering a final rule that would amend its emergency planning regulations to require consideration of the use of KI as a supplemental protective action for the public. We will take your comments into account in that context.

The Commission has considered the KI policy question on numerous occasions. The administration of KI before or very soon after inhaling or ingesting radioiodine will greatly reduce the uptake of radioiodine by the thyroids of children as well as of adults, thus reducing the thyroid dose and the subsequent risk of thyroid cancer. However, other protective actions are equally important. Early evacuation is the single most effective protective action against a large release of radioactive material. It can preclude large radiation doses to the public from all radionuclides, can protect all organs, and can be effective for all pathways by which dose is delivered if evacuation is accomplished before evacuees are exposed to a large radioactive release. Therefore, when there is a potential of a large radioactive release, the NRC's primary emergency response objective is to evacuate everyone, including children, before they are exposed to any radiation.

While early evacuation is the most appropriate action in the event of a serious accident, there are circumstances in which the evacuation might not be completed before arrival of the radioactive plume. These circumstances include very rapidly progressing accidents, situations in which people cannot move for some reason, such as severe weather, and situations in which the protective action decision-making process breaks down. In these circumstances, sheltering might be the most appropriate action until evacuation can be carried out. For those who are likely to be sheltered (for example, nuclear plant workers and persons in nearby hospitals or prisons), the use of KI is already included in emergency plans. The NRC has recently determined that KI is a reasonable, prudent, and inexpensive supplement to evacuation for specific local conditions.

Several States currently have a supply of KI to be used as a supplemental protective action for the public. Some States have expressed concerns about freely distributing KI during an accident. KI, although approved by the Food and Drug Administration (FDA) since 1978 for over-the-counter use, is a drug with age-dependent doses and possible side effects. Although serious side effects are rare, some States are concerned about their responsibilities and

liabilities if there were a serious adverse reaction to KI that they had distributed. The FDA is currently reviewing its recommended dose level for KI in light of European practice and guidelines for the World Health Organization. These matters, as well as the appropriate mechanisms for procuring and distributing KI, are factors to be considered in making any determination as to the use of KI for the public. The Commission is preparing a guidance document for use by the States that will attempt to discuss all these matters, including practices in Europe and elsewhere, as fairly and comprehensively as possible.

The NRC, State and local governments, and nuclear plant operators currently have robust plans, facilities, and equipment to decide on the appropriate protective actions, and to implement protective actions in the event that an accident at a nuclear power plant may result in significant releases of radioactive materia, although extensive public distribution of KI is not contemplated in most of these plans. The plans are exercised biennially and are graded by NRC and the Federal Emergency Management Agency (FEMA). Individual Commissioners routinely participate in those exercises, and have been favorably impressed with the capabilities demonstrated by the licensees, the State and local responders, and the Federal family of responders (NRC, FEMA, the Department of Energy, and others). The Commission believes that appropriate protective actions, including the use of KI if a State chooses to use KI for its citizens, can and will be taken in the event of an actual radiological emergency.

There have been differences between the NRC and FEMA with regard to issues such as funding of local State stockpiles of KI and the utility of regional Federal stockpiles. Therefore, I have requested a meeting with FEMA Director James Witt to discuss this matter.

The Commission will continue its deliberations on the final rule related to the use of KI in a radiological emergency. Please contact me if I can be of further assistance.

Sincerely,

**/RA/**

Richard A. Meserve