

July 2, 2002

Patricia Acampora
Member of Assembly
State of New York
Legislative Office Building 725
Albany, NY 12248

Dear Ms. Acampora:

I am responding to your letter of March 15, 2002, in which you express concerns about the safety of the residents who live on the East End of Long Island, within close proximity (twelve miles or more) to the Millstone Power Station. In addition, you request that KI be supplied to public health authorities and health facilities on the East End of Long Island and that the ten-mile emergency planning zone be extended to a fifty-mile radius.

As you are aware, the U. S. Nuclear Regulatory Commission (NRC) amended its emergency planning regulations to require that States consider including the prophylactic use of potassium iodide (KI) as a protective measure for the general public in the plume exposure pathway Emergency Planning Zone (EPZ) (66 FR5427, January 19, 2001). Along with this rule change, the NRC is providing, upon a State's request, an initial supply of potassium iodide for States that choose to incorporate KI for the general public into their emergency plans. In the unlikely event of a reactor accident, the use of KI within the plume exposure pathway EPZ is a reasonable and prudent supplement to sheltering and evacuation for specific local conditions. The State of New York is one of the states that has received KI tablets under the NRC program.

The plume exposure EPZ was designated by the Commission as the area for consideration of KI because people within this area are the closest to the plant and this is the population that would be most at risk from exposure to radionuclides from a reactor accident. The primary risk to people close to the plant is whole body exposure to noble gases (Xenon, Krypton). Inhalation of radioactive iodine and other radioactive materials poses a much lesser risk.

The size (approximately 10 mile radius) of the plume exposure pathway EPZ is based on conservative accident analyses. These analyses show that projected doses from most core melt sequences would not exceed the levels above which federal guidelines recommend protective actions for the plume exposure pathway EPZ. For the low probability worst core melt sequences, the detailed planning within the plume exposure pathway EPZ provides a substantial base for expansion of response efforts in the event that this proved necessary.

Evacuation is the most effective protective measure in the event of a radiological emergency because it protects the whole body (including the thyroid gland and other organs) from all radionuclides and all exposure pathways. KI is only effective in reducing internal dose to one gland--the thyroid--from one substance--radioactive iodine-- that may be present in the plume.

Patricia Acampora

-2-

KI will not reduce dose to any other part of the body. KI will not reduce dose received from other radionuclides that would be present in the plume. The use of potassium iodide, if taken properly, will help reduce the dose to the thyroid gland from radioactive iodine. KI does not prevent cancer. It does help reduce the risk of thyroid cancer due to exposure to internally ingested or inhaled radioactive iodine.

In addition to the plume exposure pathway EPZ, NRC regulations require an ingestion pathway EPZ which extends to about 50 miles radius from the plant. Beyond 10 miles, the primary potential exposure from radioactive iodines would be via ingestion of contaminated food and water due to settling of radioactive material from the plume on the ground. Therefore, the primary protective action strategy beyond 10 miles is based on eliminating consumption of contaminated food and water, as well as access controls and decontamination. This strategy interdicts the dominant pathway for radioactive iodine exposure.

Under recent legislation (Pub. Law No. 107-188), the federal government is to establish a national stockpile of potassium iodide tablets and is to make available to State and local governments (meeting certain conditions) KI for stockpiling and for distribution as appropriate to public facilities within twenty miles of a nuclear power plant. The program under this legislation is separate from the NRC's program for providing an initial supply of KI for states that choose to incorporate KI for the general public into their emergency plans.

The Food and Drug Administration has approved potassium iodide for sale as an over-the-counter medication. Any persons interested in obtaining KI for themselves and family members can order it through their pharmacy or from one of several internet sites. As with any medication, individuals should check with their doctor or pharmacist before using it.

If you have questions please contact either myself or Patricia Milligan, of my staff, at 301-415-2223.

Sincerely,

/RA/

Kathy Halvey Gibson, Chief
Emergency Preparedness and
and Health Physics Section
Equipment and Human Performance Branch
Division of Inspection Program Management
Office of Nuclear Reactor Regulation

Enclosure: As stated

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Kathy Halvey Gibson, Chief
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Office of Nuclear Reactor Regulation

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