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To the Editor
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The October 5th opinion piece regarding the distribution of potassium iodide (KI) falls far short of accurately describing the chemical itself, its efficacy at long distances from nuclear power plants and the NRC's actions.

The NRC's primary focus is protecting public health and safety with respect to the civilian use of radioactive materials, and we work closely with our federal partners in this regard.

The NRC has included KI in our emergency preparedness regulations since January 2001. After a petition from Peter Crane (former NRC counsel for special projects), we proposed a rule requiring states with populations within 10 miles of a nuclear plant to consider using KI as a supplement to evacuation and sheltering. That rule became effective in April 2001, and the NRC made KI available to the relevant states in December 2001, after the Food and Drug Administration updated its KI dosage guidance.

Since that date, the NRC has distributed approximately 12 million KI tablets to the 21 states that requested it, and assisted the Department of Health and Human Services in distributing a pediatric liquid form of KI to the 11 states that asked for it. The NRC is currently exploring options for distributing KI in the future.

The NRC's KI distribution method meets or exceeds what's done in the rest of the developed world. According to an international survey in 2003, typical KI distribution zones extend 1.3 to 12 miles from nuclear power plants. For areas beyond these zones (out to about 50 miles for U.S. plants, and from 12 to 30 miles elsewhere), removing potentially contaminated foods from the market is essential in protecting the population.

The consequences of failing to interdict contaminated foods were demonstrated in the aftermath of the 1986 Chernobyl accident. According to a 2005 report published by the Chernobyl Forum - an international group of experts from agencies such as the World Health Organization, the United Nations Environment Program and the UN Scientific Committee on the Effects of Atomic Radiation - "Drinking milk from cows that ate contaminated grass immediately after the accident was one of the main reasons for the high doses to the thyroid of children, and why so many children subsequently developed thyroid cancer."

Plans to prevent the distribution of contaminated food, particularly milk, are an important part of emergency planning for every nuclear power plant. These plans involve state and federal agencies including the U.S. Department of Agriculture, which routinely intercepts food products in response to health threats.

Proper use of KI reduces how much radioactive iodine the thyroid gland can absorb. This reduces, but does not eliminate, the risk of thyroid disease, since many other radionuclides could be released in the event of a serious incident at a nuclear power plant. Nor does KI protect the thyroid gland from any external exposure to radiation.

Existing emergency preparedness programs at every U.S. reactor help local and state officials determine what steps, including KI, are called for to protect public health and safety. Evaluated exercises on these emergency plans regularly hone the abilities of plant operators, first responders and government officials to effectively deal with such situations and protect the public. These efforts will help ensure the public remains safe in the very unlikely event of an incident at a U.S. nuclear power plant.

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