



STATE OF MICHIGAN
 DEPARTMENT OF ENVIRONMENTAL QUALITY
 LANSING

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Attention: Rulemakings and Adjudications Staff
 U.S. Nuclear Regulatory Commission
 Washington, DC 20555-0001

OFFICE OF THE SECRETARY
 RULEMAKINGS AND
 ADJUDICATIONS STAFF

[Docket No. PRM-50-79]

Lawrence T. Christian, et. al.
 Petition for Rulemaking
 Specific Issue: Provide KI to daycare centers and nurseries

To Whom It May Concern:

A new rulemaking is not necessary to address the identified concerns.

In light of recent terrorist threats against nuclear power plants, protection of the youngest segment of our population from potential overexposure of the thyroid to radioiodine is a valid concern. If an unlikely release of radioiodine occurs, nursery schools and daycare centers represent a segment of the population that is most at risk. It is evident that young children are of greater concern than an adult, probably by a factor of 3-7 times, depending on age. Although evacuation trigger levels are geared toward an adult dose in Michigan, they are conservative. The State is very proactive and actual child thyroid doses are likely to be small to none in a real event. Evacuation is the best protective action against this radiological hazard. Our greatest concerns have been found to be the 'what ifs'. What if sheltering is ordered due to bad weather? What if a child is trapped in the plume in traffic? These considerations tend to be improbable and of low consequence. The big picture suggests that the probability of an event, even a terrorist event, is low. The probability of any high level consequence (thyroid cancer) is even lower due to prompt evacuation and medical follow up capabilities in Michigan. NRC Commissioner, Nils J. Diaz, has commented that he believes that "it is wrong to base decisions on worst case scenarios that are highly unlikely." Evacuation is still the best protective action against all radiological hazards.

Other concerns are that appropriately providing each child with a proper dose of KI may delay evacuation. Large doses to neonates can result in thyroid dysfunction that will require medical follow up. Management concerns include distribution, changing populations, compliance, expiration dates, and liability. Although young children are most at risk, others could theoretically benefit from KI. Where is the limit of practical applicability?

The USPS has opted to provide KI to all postal workers. Given the very low probability of a far ranging incident, and high probability of a local evacuation, most of this KI will not be used. Postal workers will be consoled at some expense. Even so, this organization has familiarized themselves with the relevant aspects and provided a solution that fits their needs. It will be

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applied under state health agency direction. An NRC advisory, rather than a rule, may more effectively stimulate each child care entity to assess the risks and rewards and implement a solution appropriate to their needs. Considering evacuation, KI appears to be a perceived need, not applicable to all that a rulemaking would subject to it. (Chernobyl thyroid cancers resulted from many days of exposure to radioiodine.) As you are aware, KI should not be considered as an alternative to evacuation. Taking KI while evacuating is like wearing two seat belts. It is likely not necessary for most, but may be desired by some. It can be advantageous in rare circumstances.

Finally, we are aware that the National Council on Radiation Protection (NCRP) and the National Academy of Sciences (NAS) are considering the practicalities of providing KI for the public. The Food and Drug Administration (FDA) may also be providing more guidance in a few months. We are interested in considering the results of these studies and further guidance before finalizing state decisions on this matter.

Sincerely

A handwritten signature in black ink, appearing to read "Lou Brandon", with a long horizontal flourish extending to the right.

Lou Brandon, Chief
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LB:JK