

## Frequently Asked Questions

# MICHIGAN'S POTASSIUM IODIDE (KI) PROGRAM

In December 2001, the Nuclear Regulatory Commission sent a letter to the 33 states with populations living within 10 miles of a nuclear power plant (NPP) to encourage states to consider distributing potassium iodide (KI) as a supplement to evacuation and sheltering as primary protective measures for accidents at NPPs. In Michigan, there are three NPPs and as a result of the NRC offer, KI is offered to the public within the 10-mile Emergency Planning Zones (EPZ).

### Did Michigan have any prior experience with the use of KI as a protective measure in the case of an NPP accident?

For many years Michigan has maintained stockpiles of KI for **use by emergency responders and persons who for health or other reasons** might not be able to evacuate the affected area. If ever there were an NPP accident and emergency responders were activated, they would be given KI along with their protective gear and radiation-detection badges. Emergency responders need KI because they may have to go into the radiation plume. These plans remain in effect.

### Why didn't Michigan stockpile KI for the public as well as emergency responders before the NRC offer?

All states, including Michigan, have had plans in place to respond to a NPP accident since 1980. The primary actions to protect the public, which are detailed in these plans, are evacuation or sheltering in place; in other words, getting people away before they can be exposed to radiation. These plans must be tested, evaluated, and approved by the Federal Emergency Management Administration (FEMA) every other year.

Consideration of public distribution of KI by the United States and other countries didn't begin until after the accident at the Chernobyl Reactor in the former Soviet Union in 1986. Over time, as the scientific data on the health effects of the Chernobyl radiation exposure accumulated, there was increasing evidence that appropriate administration of KI could be effective in preventing thyroid cancer. In the United States, only three states attempted public KI distribution programs prior to 2001.

After the September 11, 2001 attacks and the December 2001 NRC offer of KI to states, more states began to develop KI public distribution programs. States are not required by regulatory agencies to make KI available to the public. The NRC also did not stipulate to states who accepted the KI offer how they should distribute it. To date, 23 of the 33 states with populations in a 10-mile EPZ have programs for public distribution of KI.

## What was Michigan's response to the letter from the NRC?

Primary responsibility for emergency planning and response for NPP accidents are shared between the MDHHS, Michigan State Police (MSP), Michigan Department of Environmental Quality (DEQ), and emergency management agencies within the 10 mile EPZs of the NPPs. MDHHS' responsibility in an NPP accident is to issue guidance and orders related to KI ingestion.

In 2002, MDHHS took lead on the decision about acceptance of the NRC KI offer, including conducting an investigation into the risks and benefits of KI distribution. MDHHS reviewed the scientific literature, conducted interviews with states that had already accepted the NRC offer, and met with local and state experts in emergency management and public health in Michigan.

MDHHS concluded that:

- KI is a non-prescription drug that appears to be safe and effective when taken within hours of exposure to radioactive iodine (one of several radioisotopes that would be released in a radioactive plume from an NPP).
- Michigan's emergency plans to protect the public around the NPPs were comprehensive and well exercised.
- Michigan's NPPs are extremely safe. In fact, an accident like that in Chernobyl or Three Mile Island would be impossible because of the design of Michigan's plants.
- Emergency planners had many concerns about a public KI distribution program, including public misunderstanding and possible delays in evacuation.
- States that had already begun distribution programs were trying a variety of approaches, ranging from direct mailing to every household to voluntary pick-up at defined locations, without evaluation.

Due to the complexity of the issues, MDHHS waited for a congressionally mandated assessment of the benefits and harms of KI distribution, which was expected in 2003.

## When did MDHHS make its decision to accept the KI offer from the NRC?

The congressionally mandated report was published in 2004 (National Research Council. Distribution and Administration of Potassium Iodide in the Event of a Nuclear Incident. National Academies Press, Washington DC 2004).

The report concluded that "KI should be available to everyone at risk of significant health consequences from accumulation of radioiodine in the thyroid in the event of a radiological incident." It provided descriptions of the variety of distribution programs undertaken by 21 states, including costs and difficulties, but did not recommend one strategy over another.

Following review of this report and discussions with DEQ and MSP, MDHHS recommended accepting KI but recognized that two major issues needed to be addressed: (1) Selecting a distribution strategy for Michigan, and (2) Identifying funds to cover the costs associated with that distribution strategy.

## How did MDHHS proceed to address the implementation issues?

A public KI distribution program would have significant impacts on the agencies most directly involved in planning and response to an NPP accident, including the plant itself, county emergency management and local health departments.

To address this, MDHHS undertook a lengthy process of stakeholder engagement to develop a KI distribution plan in collaboration with these agencies. Multiple opinions were considered. Multiple drafts of proposed distribution plans were developed, reviewed, and revised between 2004 and 2007. Meetings and conference calls with all stakeholders were held throughout the process.

A policy statement and implementation plan outline was finalized and approved by the MDHHS Director in February 2008. Michigan's three nuclear power plants agreed to provide funding to support plan implementation at about the same time.

## Why did implementation begin in October 2009?

Once the plan outline and funding were in place, MDHHS was required to make an official request for KI to the NRC to receive the KI from the manufacturer. In addition, a detailed implementation plan was submitted to FEMA for review and approval. That request for KI was made on February 8, 2008. The KI shipment itself was received in May 2009 due to manufacturing delays. The program was finalized and launched in October 2009.