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Congress of the United States
House of Representatives
Washington, DC 20515–2107

March 25, 2011

Governor Mike Beebe
State Capitol Room 250
Littlerock, AR 72201

Dear Governor Beebe:

I write to urge you to take advantage of the Nuclear Regulatory Commission's (NRC's) policy of providing a free supply of potassium iodide to States that request it[1] for residents that live within 10 miles of an operating nuclear power plant in order to counteract the potential health effects associated with a radiological release. Since 2001, when this NRC policy went into effect, 22[2] of the 34 States that have operating nuclear reactors have made such a request, but Arkansas reportedly has not.

If an earthquake or other natural disaster, terrorist attack, or accident caused a radiation release from the nuclear reactor(s) located in STATE, then one of the greatest risks to health comes from radioactive forms of the chemical element iodine. Radioactive forms of the element iodine are readily taken up by the thyroid gland and cause cancers and other debilitating diseases. Children are the most vulnerable because their thyroid glands concentrate more iodine on a mass basis than adults and are more sensitive to radiation because of rapidly growing cells. Potassium iodide, known by its chemical symbol KI, protects the thyroid gland by flooding it with stable iodine so that the gland cannot take up the radioactive form.[3]

Thyroid cancer was the biggest negative health impact caused by the Chernobyl nuclear reactor disaster. [4] More than 6,000 Russian, Ukrainian and Belarusian residents who were children at the time of the Chernobyl nuclear reactor disaster developed thyroid cancer. The incidence of thyroid cancer in the contaminated areas was triple that of normal thyroid cancer incidence in the area.[5] Despite the elevated levels of radioactive iodine detected in Poland after the Chernobyl accident, exposed individuals in Poland did not experience such an increase in

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[1] This NRC rule also applies to Tribal governments, and local governments that have been designated by States to request potassium iodide funding.

[2] Alabama, Arizona, California, Connecticut, Delaware, Florida, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Vermont, Virginia, and West Virginia.

[3] http://www.birdflumanual.com/resources/Self_Defense/files/Guidance%20for%20use%20of%20KI%20for%20nuclear%20emergency%20USG.pdf

[4] http://www.unscear.org/docs/reports/2008/Advance_copy_Annex_D_Chernobyl_Report.pdf

[5] http://www.unscear.org/docs/reports/2008/Advance_copy_Annex_D_Chernobyl_Report.pdf

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thyroid cancer because they were provided with prophylactic KI.[6] In the days following the devastating earthquake in Japan, potassium iodide was distributed to those living in proximity to the Fukushima Daiichi nuclear power plant. Potassium Iodide has also been distributed to federal employees and U.S. military personnel who have been dispatched to Japan to assist in the emergency response to the Japanese disaster.

Timing of KI distribution is critical and is most effective if used within 3-4 hours of exposure.[7] According to the Food and Drug Administration (FDA), inhalation of radioactive iodine is a significant contributor to exposure and is of particular concern for those residing in the immediate area of a nuclear accident or otherwise directly exposed to the radioactive plume. This means that it is critical to distribute KI to residents and local authorities before a radiation release happens.

I urge you to take advantage of this opportunity to greatly enhance Arkansas' levels of preparedness for a radiological emergency. Your citizens deserve no less protection from thyroid cancers that could result in the event of a U.S. nuclear accident then our military personnel and federal employees are receiving as they assist Japan in responding to the nuclear accident that has taken place at Fukushima.

Thank you for your consideration of requesting potassium iodide from the NRC to keep your residents safe from radioactive iodine in the event of a nuclear disaster. If you have any questions or concerns, please have your staff contact Dr. Ilya Fischhoff or Dr. Michal Freedhoff of my staff at 202-225-2836.

Sincerely,

Edward J. Markey

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[6] Nauman J, Wolff J. (1993) Iodide prophylaxis in Poland after the Chernobyl reactor accident: Benefits and risks. *The American Journal of Medicine*, Volume 94, Issue 5, Pages 524-532.

[7] http://www.fda.gov/Drugs/EmergencyPreparedness/BioterrorismandDrugPreparedness/ucm072265.htm