Monitoring for Increased Levels of Radioactive Material in the US as a Result of the Incident with the Fukushima Nuclear Incident in Japan

Summary: As a result of the incident with the Fukushima nuclear plant in Japan, highly sensitive radiation monitors operated by EPA and others are detecting very low levels of radioactive material in the air in the United States. These levels were expected and consistent with estimated releases from the damaged nuclear reactors and are far below levels of public health concern.

Elevated levels of radioactive material in rainwater have also been expected as a result of the nuclear incident after the events in Japan, since radiation is known to travel in the atmosphere. There have been reports received that several states including Pennsylvania and Massachusetts have detected elevated levels of radiation in rainwater following recent precipitation events.

Background
The numbers of the elevated levels of radioactive material being reported in Massachusetts are 79 picocuries (pCi) per liter (one picocurie is a trillionth of a curie). The numbers reported in Pennsylvania range from 40-100 picocuries per liter. Although these are levels above the background levels historically reported in these areas, they are still about 25 times below the level that would be of concern for use as a sole source of water over a short period of time, even for infants and pregnant or breastfeeding women, who are the most sensitive to radiation.

While short-term elevations such as these do not raise public health concerns – and the levels seen in rainwater are expected to be relatively short in duration – the U.S. EPA has taken steps to increase the level of monitoring of precipitation, drinking water, and other potential exposure routes to continue to verify that.

Given the release of radiation in Japan, it was expected that radiation monitors in this country and elsewhere will detect minute quantities of radiation. These monitors are highly sensitive and can detect amounts of radiation in trillionths of a Curie. We expect environmental monitors will continue to detect low levels of radiation in surface waters due to radioactive material in the air. When it rains or snows, the radioactive material is washed to the ground and onto surface waters.

What the US Federal Government is Doing
EPA’s Radiation air monitoring network continues to conduct near-real-time air monitoring in networks across the nation. With these recent reports, the US EPA has increased monitoring across the country to ensure that the American people have the most up to date information.

What information is available to the public:

The EPA has posted information on its website at http://www.epa.gov/japan2011/

CDC has posted FAQs on our website at http://emergency.cdc.gov/radiation/isotopes/iodine131surfacewater.asp
USA.gov continues to consolidate federal guidance related to this situation at http://www.usa.gov/Japan2011.shtml

**Recommendations**
The federal government’s only recommendation to state and local governments at this time is to continue to share their testing results with the appropriate federal authorities. EPA will continue to communicate nationwide sampling results as they come in.

At this time, there continues to be no indication for anyone in the United States to take potassium iodine or switch to bottled water on the basis of the events in Japan.

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**Categories of Health Alert messages:**
- **Health Alert** conveys the highest level of importance; warrants immediate action or attention.
- **Health Advisory** provides important information for a specific incident or situation; may not require immediate action.
- **Health Update** provides updated information regarding an incident or situation; unlikely to require immediate action.
- **HAN InfoService** provides general public health information; unlikely to require immediate action.

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#This Message was distributed to State and Local Health Officers, Public Information Officers, Epidemiologists and HAN Coordinators as well as Clinician organizations#

You have received this message based upon the information contained within our emergency notification database. If you have a different or additional e-mail or fax address that you would like us to use, please contact your State-based Health Alert Network program at your State or local health department.

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Several states have reported finding Iodine-131 in surface water (e.g., lakes, rivers, and reservoirs) and rain water. What does this mean for the public’s health?

Highly sensitive radiation monitors operated by EPA and others have detected very low levels of radioactive material in the air in the United States. These levels are consistent with estimated releases from the damaged nuclear reactors.

These findings were expected, given the sensitivity of our monitors and the fact that radioactive material is known to travel in the atmosphere. Federal, state, and local authorities will continue to monitor levels.

Is it safe to drink rain water?

If someone uses rainwater as a drinking water source, they could be exposed to radiation at higher levels than someone who drinks water from a public system. However, the levels being seen now are 25 times below the level that would be of concern for use as a sole source of water over a short period of time, even for infants, pregnant women or breastfeeding women, who are the most sensitive to radiation.

Will contaminated rainwater hurt me? Is it okay for my kids to play in the rain?

The very low levels of radioactive material currently being measured in surface water and rain water are far below those of public health concern.

Is it okay for my pet to drink the rainwater?

Drinking rainwater contaminated with radioactive material at the levels currently being detected is unlikely to harm your pet.

Since contaminated rain may have fallen in my area, is it okay to eat food from my garden or use rain water to irrigate it?

Yes. Keep in mind that it is always a good idea to wash food from your garden before you eat it.

Are there any groups of people that should be especially sensitive to radiation?

Infants, pregnant women and women who are breastfeeding are particularly sensitive to radiation. However, levels being measured now are still many times below the risk for even these groups, even for people who drink rainwater. Drinking water levels are many times below this. At this time, there is no need to take extra precautions with regard to drinking water.

Is it okay to take a shower or bath? Swim in a pool? In a river or lake?

Showering, bathing, or swimming in water with the amount of radioactive material that is currently being measured will not harm your health.

Should I drink bottled water instead of tap water?

At this time, there is no reason to switch to bottled water. State and local authorities will provide information for your community if this situation changes.

Should I be testing my water?

At this time, there is no need to take extra precautions with regard to drinking water.

States and the federal government routinely conduct water monitoring for safety and are working to ensure that drinking water does not pose a health risk to people in the US.

Is this likely to be a long-term problem?

Given the uncertainty related to the nuclear reactors in Japan, we don’t know how levels of radiation currently seen in surface water and
rain water will change in the immediate time period. However, we do know that Iodine-131 disappears relatively quickly in the environment.

Who can I contact for the best information about my community?

The best source of information about your community is your local drinking water program or department, or your state environmental protection division or program.

The Centers for Disease Control and Prevention (CDC) protects people's health and safety by preventing and controlling diseases and injuries; enhances health decisions by providing credible information on critical health issues; and promotes healthy living through strong partnerships with local, national, and international organizations.

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