

## **EPA Talking Points**

As a result of the incident with the Fukushima nuclear plant in Japan, several EPA air monitors have detected very low levels of radioactive material in the United States consistent with estimates from the damaged nuclear reactors. These detections were expected and the levels detected are far below levels of public-health concern.

Elevated levels of radioactive material in rainwater have 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 the states of Pennsylvania and Massachusetts have seen elevated levels of radiation in recent precipitation events.

The numbers being reported in Massachusetts are 79 picocuries per liter. The numbers reported in Pennsylvania range from 40-110 picocuries per liter. EPA is reviewing this data – however, in both cases these are levels above the normal background levels historically reported in these areas.

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.

EPA's Radiation air monitoring network continues to conduct near-real-time air monitoring in networks across the nation. In recent days, we have increased monitoring for other potential exposure routes in the Western states such as drinking water and rain water.

With these recent reports, the US EPA has increased monitoring across the entire country to ensure that the American people have the most up to date information and to verify that public health is protected.

We expect to have the first results in the coming days.

EPA's only recommendation to state and local governments is to continue to coordinate closely with EPA, CDC and FDA – EPA will continue to communicate our nationwide sampling results as they come in.

## **EPA Q and A**

### **1. Are the levels we're seeing in precipitation likely to lead to harmful levels in milk and/or drinking water?**

While short-term events such as these do not raise public health concerns, the U.S. EPA has taken steps to increase the level of monitoring of precipitation, drinking water, and other potential exposure routes.

### **2. Do these levels found in rainwater exceed EPA drinking water MCLs? If so, why shouldn't people be concerned.**

While the levels in the rainwater exceed the applicable MCL of 3pCi/L for drinking water, it is important to note that the corresponding MCL for iodine-131 was calculated based on long-term chronic exposures over the course of a lifetime – 70 years. The levels seen in rainwater are expected to be relatively short in duration.

### **3. Why are we beginning to see radioactive material in precipitation on the east coast as well as on the west coast? Will we see these results across the entire country?**

EPA is beginning to receive verbal reports of elevated but trace levels of radioactive iodine in precipitation samples analyzed by State laboratories. EPA is analyzing our own RadNet samples at this time to confirm these reports. In the coming days, EPA will also issue guidance to communities on this. We continue to expect similar reports from state agencies and others across the nation given the nature and duration of the events in Japan.

EPA, and many international environmental agencies, routinely engage in studies or analysis of trans-boundary air pollution. Intercontinental transport is a well documented process, and EPA would expect the conditions that allow for long-range air pollution transport to also support the transport of radioactive particles from Asia to North America and across the northern hemisphere. EPA expects the measured levels to be extremely low as this air mass disperses across our planet.

## **Water/Precipitation**

### **4. How often does EPA do drinking water monitoring for radiation?**

EPA's RadNet Drinking Water Program obtains quarterly drinking water samples from 78 sites across the country. Due to the nuclear incident in Japan, our sampling stations nationwide will collect the samples immediately and send them to our laboratory for analysis.

From the time the samples get to the laboratory, it takes approximately three days to complete the analysis.

### **5. How often does EPA sample precipitation?**

EPA scientists routinely tests precipitation samples from more than 30 sites in the U.S. The stations submit precipitation samples to the EPA lab as rainfall, snow or sleet occurs. Under routine circumstances, samples are analyzed by EPA scientists monthly.

Since the Japanese nuclear incident, EPA has accelerated routine precipitation sampling efforts.

EPA received samples from 18 stations (as of March 21, 2011) and will perform gamma analysis on each sample, followed by the routine analyses. Routine analysis of precipitation for gamma emissions takes about two days from the time the lab receives the sample. This is to ensure the proper analysis and quality assurance (QA) takes place before the results are released. The tests for specific radioactive material may take longer.

At this time, the findings of our air monitors and air filter analysis do not indicate that radiation levels of concern in the air have or will reach the U.S.

## **6. Why is EPA sampling precipitation?**

Sampling precipitation for radioactive contaminants during an emergency is one way to help public health officials ensure that food and water supplies are safe for the public.

In the event of a serious nuclear power plant accident, radioactive material may be released into the environment. Some of this radioactive material attaches itself to dust particles in the air and can be carried long distances in the wind. When these particles are caught in precipitation, e.g., rain or snow, they are deposited directly onto the ground. After landing on the ground, they may potentially contaminate drinking water sources and growing food supplies.

## **Milk**

## **7. Does EPA test milk for radiation contamination?**

Yes. EPA routinely samples cow milk at more than 30 stations every three months. Due to the incident in Japan, EPAS has accelerated our regularly scheduled milk sampling and will collect and analyze samples from sampling stations across the country immediately.

## **8. Why has EPA increased their milk sampling?**

EPA's existing milk sampling routine would have RadNet operators collect milk samples during the first week in April. Instead, our sampling stations across the nation will collect the samples immediately.

This action is precautionary, to make sure that we are gathering as much data as possible in order to inform our scientists and the public.

## **FDA Q AND A**

### **9. What levels of iodine/radioactive material in milk would make it unsafe for consumption?**

FDA has set a Derived Intervention Level (DIL) for Iodine-131 of 170 Bq/kg in foods prepared for consumption. This level does not define a safe or unsafe level of exposure, but instead a level at which protective measures would be recommended to ensure that no one receives a significant dose. This guideline is based on very conservative assumptions regarding the percentage of the diet assumed to be contaminated as well as the amount of food consumed and the length of time an individual consumes contaminated food.

### **10. Is there any possibility of milk being contaminated as a result of cows eating contaminated grass or feed crop in the U.S.?**

At this time, theoretical models do not indicate that harmful amounts of radiation will reach the U.S. and, therefore, there is little possibility of domestic milk being contaminated as a result of grass or feed contamination in the U.S. FDA, together with other agencies, is carefully monitoring any possibility for distribution of radiation. FDA is carefully monitoring and evaluating the situation and will implement further testing of milk if there is evidence that grass or feed crops have become contaminated.

### **11. What will FDA do if grass or feed crop in the US does become contaminated?**

FDA's response will depend on the nature of the risk determined to exist. If the grass or feed crop in the U.S. becomes contaminated FDA will:

- determine the extent/type of contamination in terms of isotopes and their levels
- identify the area contaminated and whether it is used for food production
- if used for food production, determine the types of foods or crops produced and whether those foods or crops would be further processed and if so, what foods would ultimately result from that further processing
- identify and segregate foods or crops in c.
- if the crops have not been further processed, we would likely consider them adulterated and would rule them out for food use
- if the crops have been further manufactured, we would assess the extent of their contamination and, if a manufacturer wished to attempt to recondition a product, would evaluate any reconditioning plans submitted by the manufacturer for the product ( whether reconditioning would be feasible would depend on contaminant half-life, effect of processing, etc.)

### **CDC Talking Points**

- Given the release of radiation in Japan, it is expected that radiation monitors in this country and elsewhere will detect minute quantities of radiation. These monitors are highly sensitive and can detect even trace amounts of radiation.
- We expect that environmental authorities will continue to detect low levels of radiation in surface waters due to radioactive material in the air.
  - There are very small amounts of radioactive material from Japan in the air over the U.S.
  - When it rains or snows, the radioactive material is washed to the ground and onto surface waters.
- Radiation detected in U.S. surface waters is far below levels of public health concern.
  - Surface waters include bodies of water such as lakes, rivers, and reservoirs.
  - State and local authorities continue to monitor surface water for radioactive contamination.
  - State and local authorities regularly check surface waters for many kinds of contaminants. They also regularly report findings to the federal EPA.
- State and local authorities will provide additional information if, in the future, you need to take steps to protect yourself from radiation in drinking water.

## CDC Q&A

1. **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.

2. **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.

3. **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.

4. **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.

5. **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.

6. **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.

**7. 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.

**8. 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.

**9. 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.

**10. 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.

**11. 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.