

**TESTIMONY OF
LISA P. JACKSON
ADMINISTRATOR
U.S. ENVIRONMENTAL PROTECTION AGENCY**

**BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE**

April 12, 2011

Good morning, Madam Chairman, Chairman Carper and Members of the Committee. I am pleased to be here today to discuss EPA's role in monitoring for radiation associated with the Fukushima Daiichi nuclear power plant emergency in Japan and the possible implications for the United States. Let me begin by expressing my sympathy for those who have lost loved ones from the earthquake and tsunami and my support to those who are working to control the radiation at the Fukushima Daiichi plant in Japan. Their efforts are selfless and deserve our recognition.

EPA Monitoring

As part of its ongoing radiation monitoring program, EPA regularly monitors and tracks radiation and radionuclide releases into the environment in the United States. Monitoring allows us to track known releases and to watch for contaminants when there is an actual, potential, or unexpected release. In addition, EPA may bring monitoring equipment to the scene of an incident to look for localized radiation and to help protect people and the environment.

EPA's nationwide radiation monitoring system, RadNet, contains 124 fixed, or stationary air monitors across the United States (of which, 122 are currently operational), and 40 deployable air monitors that can be sent to take readings anywhere in the United States or its territories. The RadNet network continuously monitors the nation's air and regularly monitors drinking water, milk, and precipitation for a variety of radionuclides (e.g., iodine-131) and radiation types (e.g., gross gamma (γ)). The near-real-time air monitoring data is continuously reviewed by computer, and if the results show an unusual increase in radiation levels, EPA laboratory staff is alerted immediately and further analyzes additional data from the monitor. RadNet data provides a means to estimate levels of radioactivity in the environment, including background radiation as well as radioactive fallout from past atomic weapons testing, nuclear accidents, and other large-scale releases of radioactive materials. RadNet also provides the historical data needed to estimate long-term trends in environmental radiation levels.

In the event of a threat of a significant radiation release, EPA typically will increase the frequency of RadNet sampling and generate many more data records for a given period of time compared to its routine operation. As a result of the events at the Fukushima nuclear plant in Japan, several EPA monitors have detected very low levels of radioactive material in the United States consistent with releases from the damaged nuclear reactors. In an effort to provide additional geographic coverage to areas in close proximity to the releases in Japan, EPA shipped 8 deployable monitors to islands in the Pacific, including Guam and the Commonwealth of the Northern Mariana Islands, and the Western United States, including Hawaii, Idaho, and Alaska. EPA has also accelerated its monitoring of precipitation, milk, and drinking water in response to the radiation concerns from the Japanese nuclear reactors. While the detections in air,

precipitation, and milk were expected, the levels detected have been far below levels of public-health concern.

EPA, along with the Nuclear Regulatory Commission, Department of Energy, Department of Defense, and the Department of Health and Human Services (FDA, CDC) are among the many federal agencies taking roles in monitoring and assessing radiation emissions from the Japanese nuclear facilities and modeling the potential dose assessments of radiation that might reach the United States. As part of the federal government's ongoing effort to make our activities and science transparent and available to the public, EPA will continue to post all RadNet data in the current on-line database, accessible through the EPA website: www.epa.gov/japan2011. In the highly unlikely event that radiation levels begin to approach levels of concern for public health, the federal government will coordinate with state and local governments to ensure that public health and safety precautions are communicated to the public.

Monitoring Results

EPA's RadNet radiation air monitors across the United States have shown typical fluctuations in background radiation levels. The levels detected are far below levels of concern. Results of EPA's drinking water sampling, precipitation sampling, milk sampling, and air filter and cartridge analysis have detected very low levels of radioactive material consistent with releases from the damaged Japanese nuclear reactors.

Keep in mind that all of us are exposed to radiation every day, both from natural sources such as minerals in the ground, and from man-made sources such as medical x-rays. Scientists

estimate that the average person in the United States receives a dose of about 310 millirem of radiation per year from natural background sources. Over the course of a lifetime, a person will average an additional ~300 millirem per year from medical procedures. The amount of radiation that will have an impact on a person's health depends on the type of radiation and the sensitivity of the individual to the radiation exposure. Differences such as age, gender and even previous exposure are factors that might influence a person's reaction to radiation exposure.

Air samples obtained through the RadNet system have, to date, contained very small amounts of iodine, cesium, and tellurium, which are consistent with possible releases from the damaged Japanese reactors. The largest amounts were found in samples from Alaska on March 19 and 24, 2011, but all of the radiation levels detected during the detailed filter analysis are hundreds of times below levels of concern.

Drinking water samples taken at various locations throughout the U.S. during the week of April 4, 2011, ranged from non-detects to trace amounts of iodine-131 – approximately 1.6 picocuries per liter (pCi/L). (An infant would have to consume over 200 gallons of this water at the highest detection level to receive a radiation dose equivalent to a day's worth of the natural background radiation exposure we experience continuously from natural sources of radioactivity in our environment.) Drinking water samples from across the country are currently being analyzed. After all data are appropriately reviewed, EPA will release analysis results and will post the results on our website.

Early precipitation samples collected by EPA indicated low levels of radioactivity. Given the sampling results in other environmental media, EPA expected to find very low levels of radiation in precipitation samples. Similar findings are to be expected in the coming weeks as radioactive materials are dispersed through the air from Japan. While the levels in some of the rainwater exceed the applicable [Maximum Contaminant Level \(MCL\)](#) 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 and are not expected to present any threat to public health.

Results from samples of milk taken March 28, 2011 in Phoenix, Arizona and Los Angeles, California showed approximately 3 pCi/L of iodine-131, which is more than 1,500 times lower than the Derived Intervention Level set by the U.S. Food and Drug Administration. These types of findings are to be expected in the coming days and are far below levels of public health concern, including for infants and children. Iodine-131 has a very short half-life of approximately eight days, and the level detected in milk and milk products is, therefore, expected to drop relatively quickly. Additional information about the broader federal response can be found at: <http://www.usa.gov/Japan2011>.

Conclusion

Since the events in Japan occurred, EPA's website has had thousands of views and we have received many positive comments from the public on the information we have made available. The Agency will continue to provide monitoring results to the public in a very open

and transparent manner. While we do not expect radiation from the damaged Japanese reactors to reach the United States at harmful levels, I want to assure you that EPA will continue our coordination with our federal partners to monitor the air, milk, precipitation and drinking water for any changes, and we will continue our outreach to the public and the elected officials to provide information on our monitoring results.

Madam Chairman, Mr. Chairman, thank you for the opportunity to testify. I welcome any questions you may have.