

Yesterday

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# Jeff McMahon

THE INGENUITY OF THE COMMONS

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TECH

## Radiation Detected In Drinking Water In 13 More US Cities, Cesium-137 In Vermont Milk

Apr. 9 2011 - 8:15 am | 3,887 views | 1 recommendation | 3 comments

- Unusual Reading At Chatanooga Nuclear Plant

- Milk Contamination At EPA Maximum

- Highest Levels Yet In Boise Rainwater



Radiation has reached the EPA's maximum contaminant level in some milk samples (Royalty-free image collection via flickr)

Radiation from Japan has been detected in drinking water in 13 more American cities, and cesium-137 has been found in American milk—in Montpelier, Vermont—for the first time since the Japan nuclear disaster began, according to data released by the Environmental Protection Agency late Friday.

Milk samples from Phoenix and Los Angeles contained iodine-131 at levels roughly equal to the maximum contaminant level permitted by EPA, the data shows. The Phoenix sample contained 3.2 picoCuries per liter of iodine-131. The Los Angeles sample contained 2.9. The EPA maximum contaminant level is 3.0, but this is a conservative standard designed to minimize exposure over a lifetime, so EPA does not consider these levels to pose a health threat.

The cesium-137 found in milk in Vermont is the first cesium detected in milk since the Fukushima-Daichi nuclear accident occurred last month. The sample contained 1.9 picoCuries per liter of cesium-137, which falls under the same 3.0 standard.

526

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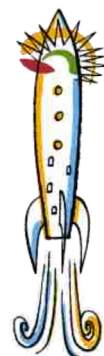
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JEFF CALLED OUT

2 hours ago



daviddelosangeles  
1

Commented on **RADIATION DETECTED IN DRINKING WATER IN 13 MORE US CITIES, CESIUM-137 IN VERMONT MILK**

“Hello annecares1 and Mr. McMahon, Most toxicologists and epidemiologists will agree that for the majority of carcinogens, there is no "safe"...”

JEFF COMMENTED

2 hours ago

“Thank you for your comment, Anne. Physicians for Social Responsibility agrees with you: There is no safe level of radionuclide exposure...”

Posted to **RADIATION DETECTED IN DRINKING WATER IN 13 MORE US CITIES, CESIUM-137 IN VERMONT MILK**

Radioactive isotopes accumulate in milk after they spread through the atmosphere, fall to earth in rain or dust, and settle on vegetation, where they are ingested by grazing cattle. Iodine-131 is known to accumulate in the thyroid gland, where it can cause cancer and other thyroid diseases. Cesium-137 accumulates in the body's soft tissues, where it increases risk of cancer, according to [EPA](#).

Airborne contamination continues to cross the western states, the new data shows, and Boise has seen the highest concentrations of radioactive isotopes in rain so far.

A rainwater sample collected in Boise on March 27 contained 390 picocuries per liter of iodine-131, plus 41 of cesium-134 and 36 of cesium-137. EPA released this result for the first time yesterday. Typically several days pass between sample collection and data release because of the time required to collect, transport and analyze the samples.

In most of the data released Friday the levels of contaminants detected are far below the standards observed by EPA and other U.S. agencies.

But the EPA drinking-water data includes one outlier—an unusually, but not dangerously, high reading in a drinking water sample from Chatanooga, Tennessee.

The sample was collected at the Tennessee Valley Authority's Sequoyah nuclear plant. A Tennessee official [told the Chattanooga Times](#) last week that radiation from Japan had been detected at Sequoyah but is "1,000 to 10,000 times below any levels of concern." The 1.6 picocuries per liter reported by the EPA on Friday is slightly more than half the maximum contaminant level permitted in drinking water, but more uniquely, it is many times higher than all the other drinking water samples collected in the U.S.

The EPA released this new data through a new interactive [open-data system](#) it quietly launched on the EPA website Wednesday. The new interface is to be regularly updated, replacing EPA's periodic news releases and pdf data charts. Here are more details of the data released Friday:

### Drinking Water

Radioactive Iodine-131 was found in drinking water samples from 13 cities. Those cities are listed below, with the amount of Iodine-131 in picocuries per liter. The EPA's maximum contaminant level for Iodine-131 in drinking water is **3** picocuries per liter.

- Oak Ridge, TN collected 3/28: **0.63**
- Oak Ridge, TN collected at three sites 3/29: **0.28, 0.20, 0.18**
- Chattanooga, TN collected 3/28: **1.6**
- Helena, MT collected 3/28: **0.18**
- Columbia, PA collected 3/29: **0.20**
- Cincinnati, OH collected 3/28: **0.13**
- Pittsburgh, PA collected 3/28: **0.36**
- East Liverpool, OH collected 3/30: **0.42**

- Painesville, OH collected 3/29: **0.43**
- Denver, CO collected 3/30: **0.17**
- Detroit, MI collected 3/31: **0.28**
- Trenton, NJ collected 3/31: **0.38**
- Waretown, NJ collected 3/31: **0.38**
- Muscle Shoals, AL collected 3/31: **0.16**

### **Precipitation**

In the data released Friday, iodine-131 was found in rainwater samples from the following locations:

- Salt Lake City, UT collected 3/17: **8.1**
- Boston, MA collected 3/22: **92**
- Montgomery, Alabama collected 3/30: **3.7**
- Boise, ID collected 3/27: **390**

As reported above, the Boise sample also contained 42 pC/m<sup>3</sup> of Cesium-134, and 36 of Cesium-137.

### **Air**

In the most recent data, iodine-131 was found in air filters in the following locations. In the case of air samples, the radiation is measured in picoCuries per cubic meter.

- Montgomery, AL collected 3/31: **0.055**
- Nome AK collected 3/30: **0.17**
- Nome AK collected 3/29: **0.36**
- Nome AK collected 3/27: **0.36**
- Nome AK collected 3/26: **0.46**
- Nome AK collected 3/25: **0.26**
- Juneau AK collected 3/26: **0.43**
- Juneau AK collected 3/27: **0.38**
- Juneau AK collected 3/30: **0.28**
- Dutch Harbor AK collected 3/30: **0.14**
- Dutch Harbor AK collected 3/29: **0.11**
- Dutch Harbor AK collected 3/26: **0.21**
- Boise, ID collected 3/27: **0.22**
- Boise, ID collected 3/29: **0.27**
- Boise, ID collected 3/28: **0.32**
- Las Vegas NV collected 3/28: **0.30**
- Las Vegas, NV collected 3/30: **0.088**
- Las Vegas, NV collected 3/29: **0.044**

No other types of isotopes were found in the most recent data from air

samples, even though EPA is also on the lookout for barium-140, cobalt-60, cesium-134, cesium-136, cesium-137, iodine-132, iodine-133, tellurium-129, and tellurium-132.

In older samples, isotopes of cesium and tellurium were found in Boise; Las Vegas; Nome and Dutch Harbor; Honolulu, Kauai and Oahu, Hawaii; Anaheim, Riverside, San Francisco, and San Bernardino, California; Jacksonville and Orlando, Florida; Salt Lake City, Utah; Guam, and Saipan on the Marina Islands.

Some of these locations had not been previously reported in EPA news releases.

The EPA has said it will [continue to monitor radiation](#) levels in air, precipitation, drinking water, and milk even if the budget impasse shuts down the government next week.

There is more discussion of maximum contaminant levels and health concerns in the related links below and their associated comments:

**Related Posts:**

[How To Remove Iodine-131 From Drinking Water](#)

[Three Sites Where You Can Monitor U.S. Radiation Levels](#)

[First US Drinking Water Samples Show Radiation from Japan](#)

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12:07 pm on 04/09/11

**annecares1**

There is no safe level of these types of radiation. You can find experts saying this over and over on the internet. They just don't want anyone to panic as there is no solution to this problem and BTW, the stupid reactor is getting worse, not better. Also, the radiation doesn't just fade away in your body. They accumulate and you had to do aggressive detoxification to get rid of them.

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12:17 pm on 04/09/11



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### ABOUT ME

If humans can be counted upon to deplete shared resources, as the "Tragedy of the Commons" holds, we can also be counted upon to mine tragedy for opportunity. This page will pursue innovators who create a cleaner engine of human activity.

I began covering the relationship between humans and our natural environment in 1985, when I discovered my college was discarding radioactive waste in the dumpster out back. That story ran in the Arizona Republic, and I have worked the energy-and-environment beat ever since—for dailies in Arizona and California, for alternative weeklies including New Times and Newcity, for online innovators such as True/Slant, Forecast Earth, and The New York Times Company's LifeWire syndicate.

I've sat through my share of commissions, hearings, and press conferences, and I've wandered far afield—to cover the counterrevolutionary war in Nicaragua, the World Series Earthquake in San Francisco, the UN Climate Change Conference in Copenhagen. For the last several years I have also been teaching journalism and other varieties of non-fiction at the University of Chicago.

[See my profile »](#)

Followers: 17  
 Contributor Since: March 2011  
 Location: Chicago

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### WHAT I'M UP TO



**JEFF MCMAHON**  
*The Ingenuity of the Commons*

Thank you for your comment, Anne. Physicians for Social Responsibility agrees with you:

There is no safe level of radionuclide exposure, whether from food, water or other sources. Period,” said Jeff Patterson, DO, immediate past president of Physicians for Social Responsibility. “Exposure to radionuclides, such as iodine-131 and cesium-137, increases the incidence of cancer. For this reason, every effort must be taken to minimize the radionuclide content in food and water.”

via [psr.org](http://psr.org)

But leading scientists and health experts issued a joint statement last month from the American Association of Clinical Endocrinologists, the American Thyroid Association, The Endocrine Society, and the Society of Nuclear Medicine. It says:

With radiation accidents, the greatest risk is to populations close to the radiation source. While some radiation may be detected in the United States and its territories in the Pacific as a result of this accident, current estimates indicate that radiation amounts will be little above baseline atmospheric levels and will not be harmful to the thyroid gland or general health.”

via [endo-society.org](http://endo-society.org) (pdf)

*In response to another comment. See in context »*

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12:54 pm on 04/09/11



**daviddelosangeles**

Hello annecares1 and Mr. McMahon,

Most toxicologists and epidemiologists will agree that for the majority of carcinogens, there is no “safe” level. Each and every exposure increases the likelihood of producing damage to DNA which can lead to the initiation of cancer.

With that said, it is important to note that there are naturally occurring sources of radioactive materials which are ubiquitous. These materials are of course a health risk but there is nothing anyone can do about them. So the question is not whether radioactive materials are released from the Japanese reactor or if those materials reach the US, the question is will they raise the exposure of Americans above the natural background levels.

*In response to another comment. See in context »*

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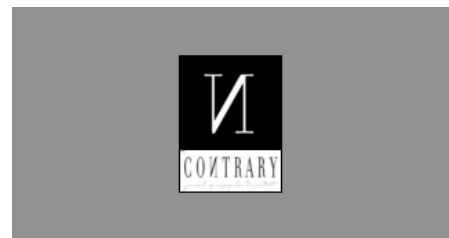
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