



Friday, March 18, 2011

Little Chance of Bay Area, State Getting Radiation from Japan: Experts

Health and environmental scientists say Japan is no Chernobyl, and harmful levels of radiation most likely will not drift across the Pacific

By: [Annette Fuentes](#)

The risks to California or any other part of the United States from a plume of low-level radioactive fallout making its way from Japan are virtually zero, medical and environmental experts in the Bay Area reaffirmed on Thursday.

At present, the level of radiation that's expected to hit the West Coast from the stricken Japanese nuclear plant will be so low that it won't even be measurable, these experts said. A radical increase in radiation releases that would result from a full meltdown at the Fukushima Daiichi power plant could change the situation, but even then it's unlikely that radiation levels here would pose a threat to public health.

“There is no health risk from this at all, no need to worry or to change your behavior,” said Kirk Smith, epidemiologist and professor of global environmental health at UC Berkeley.

The federal Environmental Protection Agency has a system of some 100 radiation monitors, called Radnet, around the country; in the Bay Area it has monitors in Richmond, San Jose and in San Francisco. Portable monitors are being dispatched to locations closer to Japan, including Hawaii, Guam, Alaska and the Marianas islands as a precaution, said Mike Bandrowski, manager of the office of air toxics, radiation and indoor air for the EPA's region 9, based in San Francisco.

“Of the current EPA monitors in place, which include some in Hawaii and Alaska, none are showing elevated levels of radiation,” Bandrowski said. The monitors show counts per minute of gamma and beta particles, data which can be publicly viewed in real time on [the EPA website](#), he said.

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Health concerns are centered on radioactive iodine, I-131, and Cesium-137, which are produced in a nuclear reactor and were likely released by Japan's reactors. Radioactive iodine has a half-life of eight days; cesium's half life is 30 years, but it is more quickly eliminated from the body than radioactive

iodine, which is absorbed by the thyroid gland. That is why potassium iodide, a salt form of iodine — from the thyroid.

Although reports indicate some Bay Area pharmacies and other stores are doing a brisk business in potassium iodide among people worried about fallout arriving here, Dr. Stuart Heard, executive director of the California Poison Control System, and clinical professor of pharmacology at UCSF, said there is no reason for anyone to take potassium iodide now.

"That is the drug to take if there were radiation, but it is not without its own risks," he said. "We want to be very clear: Until and unless they are advised by public health authorities, people should not take potassium iodide."

Heard said that potassium iodide can have side effects, including nausea, vomiting and diarrhea as well as severe allergic reactions.

Air currents from Japan will inevitably arrive at California's shores, most likely the southern part of the state, said Eric Stevenson, director of technical services for the Bay Area Air Quality Management District. But there is low probability that such currents will be carrying radioactive particles in any significant quantity, he said. The reasons have to do with the nature of the particles and the atmosphere's movements.

"The radioactive particles have to be lofted high up in atmosphere to be carried over 5,000 miles. They have to be fairly grainular in nature in order to carry," he said. "The releases in Japan have mostly been limited to low-altitude emissions. So we don't anticipate a lot of material making it across the Pacific." Stevenson said that as the plume of radiation crosses the ocean, it becomes diluted with more air and most of the radioactive particles will have fallen out — into ocean.

However, he added that the current consensus on no-risk could change if conditions in Japan change. "In order for there to be a change in that prognosis something would have to occur of major proportions in Japan," he said. "There would have to be a very long, hot, sustained fire or explosion, as happened at Chernobyl." But he noted that the Chernobyl reactor used graphite rods, which caused the long-burning fire, sending radiation into the atmosphere. But Japan's reactors do not.

Many are looking to Chernobyl now for contrasts and comparisons of what possible outcomes will mean for health impacts. UC Berkeley's Smith said that Chernobyl's long-term impacts on the health of those in the affected areas, years after the reactor's meltdown, should reassure anyone worried today about radiation drifting from Japan.

"We know more about the health impacts of radiation than anything else because of the atomic bombs study," he said, referring to U.S. tests from 50 years ago. "In Chernobyl, there were 4,000 thyroid cancers, and 80 percent of those were among the workers at the plant, and only nine deaths from them over 25 years," he said. "Unless things change, there won't be any radiation to the Japanese population comparable to that. The real concern is for the Japanese workers at those plants."