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Military Crew Said to Be Exposed to Radiation, but Officials Call Risk in U.S. Slight

By **WILLIAM J. BROAD**

The Pentagon was expected to announce that the aircraft carrier **Ronald Reagan**, which is sailing in the Pacific, passed through a radioactive cloud from stricken nuclear reactors in **Japan**, causing crew members on deck to receive a month's worth of radiation in about an hour, government officials said Sunday.

The officials added that American helicopters flying missions about 60 miles north of the damaged reactors became coated with particulate radiation that had to be washed off.

There was no indication that any of the military personnel had experienced ill effects from the exposure. (Everyone is exposed to a small amount of natural background radiation.)

But the episodes showed that the prevailing winds were picking up radioactive material from crippled reactors in northeastern Japan. Ever since an earthquake struck Japan on Friday, the authorities worldwide have been laying plans to map where radioactive plumes might blow and determine what, if any, danger they could pose to people.

Blogs were churning with alarm. But officials insisted that unless the quake-damaged nuclear plants deteriorated into full meltdown, any radiation that reached the United States would be too weak to do any harm.

Washington had "hypothetical plots" for worst-case plume dispersal within hours of the start of the crisis, a senior official said Sunday. The aim, the official added, was "more to help Japan" than the United States, since few experts foresaw high levels of radiation reaching the West Coast.

For now, the prevailing winds over Japan were blowing eastward across the Pacific. If they continue to do so, international stations for radioactive tracking at Wake or Midway Islands might detect radiation later this week, said Annika Thunborg, a spokeswoman for an arm of the **United Nations** in Vienna that monitors the planet for spikes in radioactivity.

“At this point, we have not picked up anything” in detectors midway between Japan and Hawaii, Ms. Thunborg said in an interview on Sunday. “We’re talking a couple of days — nothing before Tuesday — in terms of picking something up.”

Agencies involved in the tracking efforts include the [World Meteorological Organization](#), the [International Atomic Energy Agency](#) and the [Comprehensive Test Ban Treaty Organization](#), which runs a global network of more than 60 stations that sniff the air for radiation spikes.

In the United States, the Departments of Defense and Energy maintain large facilities and cadres of specialists for tracking airborne releases of radiation, both civilian and military.

On Sunday, the [Nuclear Regulatory Commission](#) said it expected no “harmful levels of radioactivity” to move on the winds to Hawaii, Alaska or the West Coast from the reactors in Japan, “given the thousands of miles between the two countries.”

In interviews, some private nuclear experts called a windborne threat unlikely. Others urged caution.

“We’re all worrying about it,” said Robert Alvarez, a nuclear expert who, from 1993 to 1999, was a policy adviser to the secretary of energy, who runs the nation’s nuclear complex.

“It’s going to be very important,” he added, “for the Japanese and U.S. authorities to inform the public about the nature of the plumes and any need for precautionary measures.”

The plume issue has arisen before. In 1986, radiation spewing from the Chernobyl disaster in Ukraine was spread around the globe on winds and reached the West Coast in 10 days. It was judged more of a curiosity than a threat.

Since then, scientists have refined their abilities to monitor such atmospheric releases. The advances are rooted in the development of new networks of radiation detectors, flotillas of imaging satellites and the advent of supercomputers that can model the subtle complexities of the wind to draw up advanced forecasts.

With the Japanese crisis, popular apprehension has also soared.

“Concern has been raised about a massive radioactive cloud escaping and sweeping over the West Coast,” said a recent blog, recommending whole grains and health foods for fighting radiation poisoning.

On another blog, someone asked, “Should I take iodine now?” That referred to pills that can prevent poisoning from the atmospheric release of iodine-131, a radioactive byproduct of nuclear plants that the Japanese authorities have identified as escaping into the atmosphere.

While federal officials expected little danger in the United States from Japanese plumes, they were taking no chances. On Sunday, Energy Department officials, speaking on the condition of anonymity, said the agency was working on three fronts.

One main player is the [Lawrence Livermore National Laboratory](#) in California. Officials said they had activated its [National Atmospheric Release Advisory Center](#), which draws on meteorologists, nuclear scientists and computer scientists to forecast plume dispersal.

Separately, energy officials said the agency was readying plans to deploy two-person monitoring and sampling teams, if necessary. The teams would travel to consulates, military installations and Navy ships to sample the air in a coordinated effort to improve plume tracking.

Finally, the department was preparing what it calls its [Aerial Measuring System](#). Its detectors and analytical equipment can be mounted on a variety of aircraft. Officials said the equipment and monitoring team are staged out of the department’s Remote Sensing Laboratory at Nellis Air Force Base in Nevada, and are on two-hour call.

“We’re on top of this,” a department official said.

David E. Sanger contributed reporting from Washington.