

Japan to evacuate more towns around crippled nuclear plant

By **Matt Smith**, CNN

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Tokyo (CNN) -- Japan's government called for evacuations Monday from several towns beyond the danger zone already declared around the Fukushima Daiichi nuclear power plant, warning that residents could receive high doses of radiation over the coming months.

Chief Cabinet Secretary Yukio Edano said the municipalities are likely to see long-term radiation levels that exceed international safety standards, and he warned that the month-old crisis at Fukushima Daiichi is not yet over.

"Things are relatively more stable, and things are stabilizing," he said. "However, we need to be ready for the possibility that things may turn for the worse."

And about an hour after he spoke, a fresh earthquake rattled the country, forcing workers to evacuate the plant and knocking out power to the three damaged reactors for about 40 minutes, the plant's owner, the Tokyo Electric Power Company, reported. The magnitude 6.6 tremor came a month to the day after the magnitude 9 quake and tsunami that knocked out the plant's cooling systems, and followed a magnitude 7.1 aftershock Thursday night.

Neither the 6.6 quake nor any of the smaller ones that rippled across the region in its wake inflicted any more damage to the plant, Tokyo Electric officials told reporters.

Japan's government said it did not know how many people would be displaced by the new evacuation orders. Evacuation orders have so far covered about 85,000 people inside the 20-kilometer (12.4-mile) zone, while another 62,000 within 30 kilometers have been told to stay inside, Fukushima Prefecture officials told CNN.

The decision announced Monday does not create a wider radius around the plant, said Masanori Shinano, an official with Japan's Nuclear Safety Commission.

Instead, "if there are areas in the northwestern parts where there is a risk of exceeding 20 millisieverts as a cumulative dose over a one-year period, the area will be designated an evacuation area even if it is beyond the 30-kilometer area," Shinano told reporters Monday night.

That dose is a tiny fraction of what would cause immediate radiation sickness, but it's more than seven times the amount a typical resident of a western industrialized country receives from background sources in a year. Long-term exposures to those levels of radiation could increase the risk of cancer -- and the presence of cesium isotopes that have half-lives of up to 30 years means that radioactivity could linger for some time.

"This policy does not require immediate evacuation right away, but we take the long-term perspective, considering the long-term effect of radiation on your health," Edano told reporters.

Japanese authorities attributed growing concentrations of cesium-134, with a two-year half-life, and cesium-137, which loses half its radioactivity over 30 years, to the decay of larger concentrations of iodine-131, which has a half-life of eight days.

Edano said residents of five towns and cities to the north and west of the plant -- Katsurao, Kawamata, Namie, Iitate and parts of Minami Soma -- should evacuate within a month if they have not already done so. Parts of Namie and Minami Soma are already within the 20-kilometer evacuation radius drawn in the first days of the accident, while Iitate, Kawamata and Katsurao are beyond the 30-kilometer range.

Residents of five other areas -- in Hirono, Kawauchi, Naraha and parts of Tamura to the south, and the rest of Minami Soma -- were told they should be prepared to clear out soon. Hirono and Kawauchi lie in the outer belt of the current zone, while Naraha and Tamura are beyond the current 30-kilometer radius.

The anti-nuclear group Greenpeace, which had warned about higher radiation levels in towns outside the evacuation zone two weeks ago, called Edano's declaration a good step, but said evacuations should take place sooner than the one-month goal Japan has set. Jan van de Putte, a Greenpeace radiation safety expert who took readings in Iitate and Namie, said the levels of radioactivity are likely to remain dangerous "for years to come."

"The bad news is what we're seeing today is going to decay very, very gradually," van de Putte told CNN.

After a month of improvisation and frustration, Tokyo Electric says it has no idea when it will be able to restore normal cooling for the reactors and spent fuel pools at Fukushima Daiichi, about 240 kilometers (150 miles) north of Tokyo. Tokyo Electric President Masataka Shimizu visited the off-site headquarters for authorities attempting to manage the disaster Monday and met with local officials from Fukushima Prefecture, emerging to issue another apology for the situation.

"I would like to apologize from the bottom of my heart to the people of Fukushima and residents of the host towns of the Fukushima power plant for forcing them to go through enormous difficulties due to the accident that occurred in the wake of the quake and tsunami," he said in a prepared statement released through the company.

Shimizu -- who was hospitalized for "fatigue and stress" in late March -- also expressed regret that he didn't apologize to Fukushima Prefecture residents before Monday. The province's governor skipped the meeting, however.

Engineers are working to drain highly radioactive water from the basements of the turbine plants behind reactors No. 1 through 3 even as they pour hundreds of metric tons of water a day into the reactors to keep them cool. The water must be pumped out in order to get to the machinery that runs the coolant systems, and Tokyo Electric has dumped more than 10,000 tons of less-contaminated water into the Pacific Ocean in the past week to make room for the stuff -- a move that drew sharp criticism of the Japanese government, which approved the discharge as an emergency measure.

Other contamination is leaking into the Pacific behind the plant, most likely carried along by groundwater, Japanese regulators have said.

At the plant Monday, workers began installing sections of silt fence around the water intakes at the back of the plant to screen out radioactive particles. But the injection of nitrogen into the containment vessel around reactor No. 1 to counter a buildup of explosive hydrogen was stopped for the recent earthquake, said Hidehiko Nishiyama, the chief spokesman for the Nuclear and Industrial Safety Agency.

In addition, Nishiyama said engineers have found gas escaping from the reactor containment vessel. But he said the nitrogen injections will resume, and the leaks were not affecting the stability of the reactor.

Hydrogen buildup is a symptom of overheated fuel rods in the reactor core. Spectacular hydrogen explosions blew the roofs and walls off the buildings surrounding the No. 1 and No. 3 reactors in the days after the tsunami, and another suspected hydrogen blast may have caused a leak in the No. 2 reactor. Tokyo Electric has said there is little danger of another explosion, but has begun pumping nitrogen into unit No. 1 as a precaution and plans to do the same for units 2 and 3.

Ailing Chang and Susan Olson, and CNN's Whitney Hurst and Ingrid Formanek contributed to this report.
<http://www.cnn.com/2011/WORLD/asiapcf/04/11/japan.nuclear.reactors/index.html?hpt=T1>