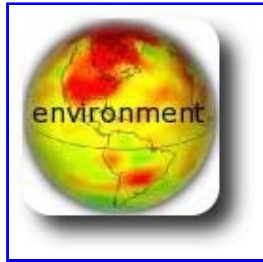


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Nuclear Plant's Fuel Rods Damaged, Leaking Into Sea



Radiation leaked into the sea from Japan's crippled nuclear plant, raising concern that seafood may become tainted, while the site's operator moved closer to restoring power to critical cooling pumps.

Five kinds of radioactive materials released by damaged fuel rods were detected in the sea, Tokyo Electric Power Co. said on its website. Levels of Iodine-131, which increases the risk of thyroid cancer, were 127 times higher than normal in a sample of seawater taken yesterday, the company said.

"You could swim in the water with these levels of Iodine-131, and there shouldn't be a problem," said Don Higson, a Sydney-based fellow at the Australian Radiation Protection Society. "The only risk might be if people eat seafood with these materials inside it and this will be something the authorities will be paying careful attention to."

Screening food for radiation is being stepped up as Japan seeks to calm a population that eats more fish than any other country other than China. Tokyo Electric said it expects to restore power to the buildings housing the plant's first four reactors later today, a step toward getting cooling systems working again. Reactors No. 5 and 6 have electricity supply.

Chief Cabinet Secretary Yukio Edano told reporters today that all Japanese vegetables on the market are safe to eat after concerns were raised about produce from the area near the plant.

Decaying Fuel Rods

"Food-borne radiation will last longer than airborne radiation," Gregory Hartl, a spokesman for the World Health Organization in Geneva, said in an interview. "Even smaller amounts of radiation in food could potentially be more dangerous because you ingest it."

The decay of radioactive fuel rods, composed of uranium and plutonium, at the Fukushima Dai-Ichi plant was suspected by company officials five days after the March 11 earthquake and tsunami, Tokyo Electric Power said. Seawater readings showed cesium-134 was 25 times normal and cesium-137 was 17 times higher, it said. Cobalt has also been detected.

Japan, an island nation that prizes raw fish, consumes about 9 million metric tons of seafood a year, according to the website of the Sea Around Us Project, a collaboration between the University of British Columbia and the Pew Environment Group. China ranked first with consumption of 13.6 million metric tons and the U.S. was third at 4.7 million tons.

Cancer Risk

Lam Ching-wan, a chemical pathologist at the University of Hong Kong's medical school, said cesium in the water is not a cause of concern, despite a half life of 30 years. "Cesium doesn't cause many problems with cancer because it's mainly concentrated in the muscles and not other organs," he said. "Muscles aren't dividing cells. Even if there's a mutation, it cannot stimulate cells and grow and produce cancer."

Japan has been battling for 12 days to prevent a meltdown at the plant. Electricity from the grid and back-up power systems to the reactor were cut off and damaged in the quake and tsunami, leading to explosions at the steel-and-concrete structures around the reactors and overheating fuel rods.

Tokyo Electric expects to restore power to parts of the building housing the most damaged reactors, 1 through 4, by the end of today, Teruaki Kobayashi said at a news conference in the capital city. Reactors 5 and 6 were shut down before the earthquake and suffered little damage. Power was restored to those units this week.

Spraying Water

Workers finished spraying water on the spent fuel pool of the No. 3 reactor at 3:59 p.m. local time today, the nuclear safety agency said. Spraying at the No. 4 reactor began at 5:17 p.m., a Tokyo Electric spokesman said.

Seventy percent of the fuel rods at the No. 1 reactor may be damaged, and 33 percent at the No. 2 unit, the utility said on March 16. There are six reactors in total.

“While we haven’t reached the point where we can say we’ve gotten out of this crisis situation, it can be said that we can see the light at the end of the tunnel,” Japanese Prime Minister Naoto Kan said at a meeting of his crisis response team in Tokyo yesterday.

Japanese stocks jumped, with the Nikkei 225 (NKY) Stock Average advancing 7.2 percent — the biggest two-day advance since April 2009, on signs of progress at the plant. Japan’s 10-year bonds fell for a second day. Markets were closed yesterday in Japan for a holiday.

Death Toll

The death toll from the nation’s worst postwar disaster rose to 9,079 as of 3 p.m. local time, with 12,782 people missing, according to the National Police Agency in Tokyo. The earthquake and ensuing tsunami devastated the country’s northern coastline and forced hundreds of thousands to evacuate.

The Japanese government is risking a food scare by failing to clarify where produce is contaminated and stopping some shipments, said Toshihiko Baba, a spokesman for the Central Union of Agricultural Co-operatives in Japan, which represents more than 4.8 million farmers.

Japan’s nuclear safety agency said the nation will limit distribution of spinach and milk after samples from the area near the plant 135 miles (220 kilometers) north of Tokyo were found to have higher-than-normal radiation levels. Farmers in Fukushima prefecture are destroying milk after the government restricted shipments.

Winds are forecast to blow from the south from near the plant this evening at up to 3 meters a second (7 miles per hour), Japan’s Meteorological Agency said. Winds are forecast to blow out to sea late tonight, from west to east at up to 3 meters a second.

Japan has distributed 230,000 units of potassium iodide to evacuation centers around the nuclear plants. Iodide pills can help prevent the accumulation of radioactive iodine in the thyroid.

The U.S. is making pills available to government employees and their families in Tokyo, Nagoya, Yokohama and 15 other prefectures, the embassy in Tokyo said in an e-mailed statement. People should only take the pills after being told to by the U.S. government, it said. The U.K. is distributing two doses to each of its citizens in Japan, with priority given to children and pregnant women.

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