

Fukushima 2013: “Remaining Radioactive Mass”, “Dangerous Leaking Radioactive Water”, All Four Reactors are “Getting Worse”

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The first thing to know about the danger from the radioactive mass remaining on site in the three reactors that melted down at Fukushima is that nobody knows how much radioactive material there is, nobody knows how much uranium and plutonium it contains, and nobody knows how to make it safe — so no one knows how great the continuing danger is.

In order to prevent nuclear material from being diverted to use in weapons, the International Atomic Energy Agency of the U.N. requires each country to report regularly on the volume of nuclear materials in its nuclear power plants. At Fukushima, this is currently impossible with the cores of the three reactors that melted down.

Diversion of this material to weapons use is not a problem at the moment, since the level of radioactivity is high enough to kill anyone who comes close to it, which is why it hasn't been moved. On the other hand, it is necessary to move it in order to measure it, and even if it was movable now, the technology to measure it does not yet exist.


Cooling the Cores Keeps Them from Burning, but Creates Radioactive Water

The Japanese Atomic Energy Agency has joined with the U.S. to develop the necessary new technology, which it hopes to begin using within a decade. The Japanese agency calls this collaboration the “world's first” attempt at such technology, since a similar U.S. initiative to measure the melted core from the 1979 Three Mile Island accident failed.

As long as Fukushima's owner, the Tokyo Electric Power Company (TEPCO), keeps the three melted cores and the fuel rods in three other storage pools sufficiently submerged in cooling water, the radioactive material will not overheat, burn, and spew radioactive debris as far as wind or water might take it.

Watertight fuel pools are used effectively at nuclear power plants around the world, including Fukushima before the March 2011 earthquake and tsunami. Now the reactor structures are no longer watertight and TEPCO has pumped millions of gallons of fresh and “least contaminated” into the structures since then, and continues to do so.

Radioactive Water Is Dangerous, And It Has To Go Somewhere

 Water used to cool nuclear fuel and waste becomes radioactive itself, as does the groundwater that infiltrates the structures. This radioactive water continues to reach the Pacific Ocean in varying quantities, as TEPCO attempts to keep it in check.

As of May 7, the Japan Times reported that TEPCO had installed 290 huge storage tanks at Fukushima to hold more than 78 million gallons (290,000 tons) of radioactive water, with another 25 million gallons still uncollected. Fukushima is generating an estimated 100,000-plus gallons (400 tons) of radioactive water every day

TEPCO estimates that groundwater is entering the complex at a rate of at least 54,000 gallons per day. In May 2012, the Japanese government ordered TEPCO to build a wall deep into the ground around the plant to keep groundwater out, a plan that might become operational by early 2015.

TEPCO is expanding its storage capacity to about 1.9 billion gallons by clearing forest and other areas around the compound. While this would probably suffice for another three years, the site is running out of storage space. Additionally, some of the storage tanks have begun to leak and contaminated water is leaking into the soil.

In the Nuclear Business, Truth Has a Limited Half-Life

To address these difficulties, TEPCO is proposing to treat its radioactive water to remove some of the radioactivity, and then release the rest into the Pacific Ocean. There is local opposition to this plan, especially from fishermen.

In July 2012, as some officials were assuring the public that fish from the Pacific were safe to eat, the Japan Fisheries Agency compiled statistics showing the opposite. As reported by a Canadian website, Vancouver's straight.com:

"The numbers show that far from dissipating with time, as government officials and scientists in Canada and elsewhere claimed they would, levels of radiation from Fukushima have stayed stubbornly high in fish.

"In June 2012, the average contaminated fish catch had 65 becquerels of cesium per kilo. That's much higher than the average of five Bq/kg found in the days after the accident back in March 2011, before cesium from Fukushima had spread widely through the region's food chain. In some species, radiation levels are actually higher this year than last."

What We Know is Dwarfed by What We Don't Know About Radioactivity

In March 2013, researchers from the Stanford University Hopkins Marine Station issued a report on Bluefin tuna caught off the California coast and tested for radioactive cesium. The report found that Bluefin tuna were 100 per cent contaminated, that not one was cesium-free. The report did not address such questions as whether cesium would continue to accumulate in tuna or whether it was appearing in other fish species.

The important aspect of this research, according to the Stanford News, was that:

"The work supports the idea that the Fukushima radioisotopes can be used to reliably determine the previously unknown trans-oceanic movements of juvenile Pacific bluefin tuna. This information could be used to prevent tuna from being overfished."

Would You Like a Side of Hot Seaweed With Your Hot Tuna?

Reporting on the same information, the Two Rivers Tribune in northern California noted:

“On the coast of California, there is a deep sea kelp forest at Corona del Mar that now contains concentrations of radiation that are 250 times higher than levels found in kelp prior to the Japanese nuclear accidents. A research article published in Scientific American reports that radiation accumulated in fish that ate near the kelp.... Presently, there is no research as to what is the exact effect on fish and their offspring will be from the increased levels of radiation that are being found....

“The Japanese government has banned both the domestic sale and international export of most fish that are caught off the Fukushima coast. Radiation levels are still rising two years after the nuclear accidents. In January of 2013 the tested levels of cesium were about 2,540 times what is considered safe for human consumption. Strontium levels are 240 times the legal limit.”

It's Not a Cover-up If Governments Gather No Useful Information, Is It?

Apparently there is no comprehensive, Fukushima-related radiation testing being carried on by the U.S. Canadian, or other governments whose people are directly affected. Nor is there any international body publicly performing this work.

The Global Monitoring Division of the Earth System Research Laboratory of the National Oceanic & Atmospheric Administration (NOAA) of the U.S. Dept. of Commerce monitors global levels of “carbon dioxide, carbon monoxide, methane, nitrous oxide, surface and stratospheric ozone, halogenated compounds including CFC replacements, hydrocarbons, sulfur gases, aerosols, and solar and infrared radiation.”

Worldwide nuclear weapons programs and nuclear power generation add ionizing radiation to the atmosphere continuously. NOAA's website offers five different safety programs related to ionizing radiation. But if NOAA (or any other government entity) is measuring ionizing radiation in the atmosphere, that information is not easily found.

What if “National Security” Depends on Citizens' Insecurity?

Search the NOAA website for strontium-90 or cesium-137 (one of the more common and more serious products of the Fukushima meltdowns with a half-life of 30 years) and there is one result, which begins promisingly:

“The Environmental Measurements Laboratory (EML) has maintained a global network of deposition sampling sites for nearly 40 years. Through CMDL support, American Samoa (SMO) and Mauna Loa (MLO) have been a part of this network for many years. This network was initiated to investigate the transport and fate of radioactivity produced from atmospheric testing of nuclear weapons. Strontium-90 was the radionuclide of primary interest due to the relatively high quantity released and its physical and chemical properties that made it a concern to human health.”

But this posting dates from 1996 and includes no data later than 1996.

Radiation Dose So Far Not Harmful, U.N. says – But It's Not Over Yet

In February the World Health Organization (WHO) of the U.N. released an almost 200-page assessment of the health risks from the Fukushima disaster, “the first-ever analysis of global health effects due to radiation exposure” from Fukushima. In a press release issued in Geneva, WHO concluded that: “for the general population inside and outside of Japan, the

predicted risks are low and no observable increases in cancer rates above baseline rates are anticipated.”

Using preliminary dose estimation data to make its predictions, the WHO report also found “that the estimated risk for specific cancers in certain subsets of the population in Fukushima Prefecture has increased and, as such, it calls for long term continued monitoring and health screening for those people.”

The release quotes Dr Angelika Tritscher, Acting Director for WHO’s Food Safety and Zoonosis Department, saying that: “In addition to strengthening medical support and services, continued environmental monitoring, in particular of food and water supplies, backed by the enforcement of existing regulations, is required to reduce potential radiation exposure in the future.”

And the WHO report “notes that the psychosocial impact of Fukushima] may have a consequence on health and well-being. These should not be ignored as part of the overall response.”

If decommissioning of Fukushima ever starts, it will take decades.

According to Natural News reporter Ethan Huff, the lack of reliable information — at least in Japan — may be less the fault of government than mainstream media:

“New data released by Japan’s Ministry of Health, Labor and Welfare (MHLW) shows once again that the Fukushima Daiichi nuclear disaster is far from over. Despite a complete media blackout on the current situation, levels of Cesium-137 (Cs-137) and Cesium-134 (Cs-134) found in produce and rice crackers located roughly 225 miles (~ 362 km) away from Fukushima are high enough to cause residents to exceed the annual radiation exposure limit in just a few months, or even weeks.

“According to Fukushima-Diary.com, which posts up-to-date information about the Fukushima disaster, rice crackers and tangerines produced in the Shizuoka prefecture are testing high for both Cs-137 and Cs-134.”

Meanwhile in recent weeks, TEPCO reportedly dumped contaminated groundwater into the Pacific, then announced that radiation levels in the seawater near Fukushima had reached record levels, probably because the radioactive water “leaked.”

At the Fukushima site, Energy News reports, workers are expecting the situation with all four reactors to get worse. While there are somewhat credible contingency plans for three of the reactors, the fourth - reactor #2 - has radiation levels that are already so intense, one worker said, that in an emergency, “a prepared squad is likely to perish before it accomplishes its mission.”

Another said, “We are clueless about reactor #2.”

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