

Tritium and Cesium Contamination at Long-Closed Wisconsin Reactor

Last February, the Genoa La Crosse Boiling Water Reactor, on the Mississippi River near Genoa, Wisconsin, was found to be leaking radioactive tritium into the groundwater.

The *La Crosse Tribune* reported March 14 that the firm LaCrosseSolutions, Inc. reported a reading of 24,200 picocuries-per-liter* in water taken from a monitoring well on Feb. 1. The US Environmental Protection Agency (EPA) allows tritium in drinking water up to 20,000 picocuries-per-liter. This allowable contamination is ten times higher than what the European Union allows.

The tritium in the groundwater from La Crosse's reactor is a danger to everyone drinking it, but the *Tribune* reported that the monitoring well water is "not used for human consumption." This assurance did not come as a relief to people in the area using well water that's not been tested. Tritium stays in the environment for 123 years, about ten of its radioactive "half-lives" of 12.3 years. This time scale gives the it a lot of time to move through the water and enter the food chain. As an emitter of beta particle radiation it isn't a great danger outside the body, but can do damage inside the body if inhaled or ingested.

The EPA estimates that seven out of 200,000 people who drink water with 20,000 picocuries-per-liter of tritium for decades would develop cancer. However, because tumors or other cancers may not appear for decades, victims or their survivors are generally unable to be compensated.

LaCrosseSolutions is working an \$85 million contract to deconstruct or "decommission" the long-shuttered and partly dismembered La Crosse boiling water reactor. The small unit was shut down in 1987, 31 years ago, after operating for 20 years. Yet it's still poisoning the environment with radioactive leaks. Unlike other heavy industries, nuclear power's machinery can keep

on poisoning its surroundings even three decades after its profitable public service has ended.

Operating reactors release tritium from vent stacks in the form of tritiated water vapor. This can produce radioactive rainfall, "which can contaminate surface water bodies as well as groundwater," according to Annie and Arjun Makhijani, of the Institute for Energy and Environmental Research. But since the La Crosse reactor has ceased operations, the tritium is no long released into the air but now its legacy is poisoned ground, contaminated and corroded pipes and duct work, and tritium leaking into the ground.

Dairyland Power Co-op, which operated the reactor from 1967 to 1987, but transferred its license to LaCrosseSolutions in 2016, isn't alone in its contamination of groundwater. In June 2011, part two of the Associated Press's comprehensive four-part investigation of US nuclear power, found that tritium leaks were underway at 48 of 64 US reactor sites, three-quarters of all the country's commercial reactor operations, "often into groundwater from corroded, buried piping."

LaCrosseSolutions's Dirty Clean-up

In addition to the poisoning of groundwater with leaking tritium, the US Nuclear Regulatory Commission announced on March 26 that LaCrosseSolutions had spilled 400 gallons of radioactively contaminated water directly into the Mississippi River in February 2017.

The NRC determined that the spill of waste water containing the deadly isotope cesium-137 was a violation of federal

regulations—one of three low-level violations identified in its annual inspection of decommissioning being done by LaCrosseSolutions—and that the cesium-137 in water samples was at concentrations exceeding federal limits. The NRC did not issue a citation but found LaCrosseSolutions had violated NRC policy.

—JL

* A picocurie is one/trillionth of a curie, or 2.2 atomic disintegration per minute. A curie is a very large amount of radioactivity, about 2.2 trillion atomic disintegrations per minute, or 37 billion disintegrations per second.



The Genoa La Crosse reactor in Wisconsin has been shut down since 1987, but is still undergoing dismantlement, a dangerous process that has caused radioactive contamination.

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National and Personal Interests in Negotiations Between North Korea and the United States

By Kelly Lundeen

Note: This article was published June 8 just before the North Korea-US summit. For updates on this topic check our Facebook page or Nuke-watch website; scroll down the Issues tab for North Korea.

Extreme fluctuations in relations between North Korea and the rest of the world in recent months have kept war hawks and peace doves at the edge of their seats. At one moment the United States and North Korea were lobbing nuclear threats at one another, sounding closer than ever in recent history to a potential military conflict. In the next moment, North and South Korea were signing a "Peace Declaration" to denuclearize the Korean peninsula at an unprecedented meeting in the Demilitarized Zone. A historic summit between the presidents of North Korea and the United States was announced, then cancelled by Mr. Trump, and, as of today, going ahead. With uneasy but high hopes for peace, the future on the Korean peninsula remains unpredictable. New approaches are in line with the agendas of changing leadership of the three countries and understanding those help explain the unfolding news.

What's in it for the US?

As North Korea is now a nuclear weapons state, the official US government position is to demand "complete, verifiable and irreversible denuclearization of North Korea." Skeptics regarding the motives behind US lead-



"Now you are here in the South, and I wonder when I can cross over to the North," South Korean President Moon Jae-in (R) asked April 27 as North Korean Chairman Kim Jong-un stepped over the curb demarcating the two countries and they shook hands. "Why don't you now?" Kim said. President Moon has been instrumental handling Trump, calming tensions, promoting a peace treaty, and normalizing relations.
Photo: Korea Summit Press Pool/Getty Images

ership allege that the summit is being planned to fail; that is, the US projects an image of working toward reconciliation while never having disavowed bellicose intentions.

Throwing a curveball into the decades-long US policy of military threats, diplomatic hostility, and harsh trade sanctions, is the US "dealmaker" seeking to fulfill his

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