News from Beyond Nuclear
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Regulator has long warned of earthquake risks at Palisades

Alleges dry cask storage of radioactive waste on Lake Michigan shore violates safety regulations

Takoma Park, Maryland—Today's 5.9 magnitude earthquake in Mineral, Virginia, despite being epi-centered around 700 miles away, nonetheless led to a declaration of an "Unusual Event" at the Palisades nuclear power plant in Covert, Michigan, according to the U.S. Nuclear Regulatory Commission (NRC). The NRC reported that Palisades, and a dozen other nuclear power plants in the eastern U.S. which declared unusual events in the wake of the earthquake, "continue to operate while plant personnel examine their sites." Of particular concern to longtime watchdogs of Palisades is the earthquake risk to high-level radioactive wastes stored there, first made public over 17 years ago by an NRC inspector, Dr. Ross Landsman.

On February 17, 1994, Dr. Landsman, an NRC Region III dry cask inspector for the Midwest, wrote NRC Chairman Ivan Selin regarding his concerns about the outdoor storage for high-level radioactive waste at Palisades, installed on the beach in 1993, just 100 yards from the water of Lake Michigan. Dr. Landsman wrote: "Actually, it's the consequences that might occur from an earthquake that I'm concerned about. The casks can either fall into Lake Michigan or be buried in the loose sand because of liquefaction…It is apparent to me that NMSS [NRC's Nuclear Materials Safety and Safeguards division] doesn't realize the catastrophic consequences of their continued reliance on their current ideology."

Liquefaction is a seismological term, referring to solid earth behaving more like a liquid during an earthquake. Palisades' oldest dry cask storage pad, holding two dozen concrete and steel silos of high-level radioactive waste, was built on top of 55 feet of loose sand, not anchored to bedrock.

Underwater submersion could lead to inadvertent nuclear chain reactions in the fissile materials, such as Uranium-235 and Plutonium-239, still present in the wastes. Burial under sand could cause the wastes to dangerously overheat. In either case, hazardous releases of radioactivity to the environment could result, complicating or preventing emergency response.

Due to such risks, in 2006 a coalition of environmental groups raised the earthquake risks to Palisades' dry cask storage as one of many challenges against the reactor's proposed 20 year license extension. Dr. Landsman, now retired, served as their expert witness, declaring his concerns in a formal affidavit. They filed an emergency enforcement petition with the NRC, but were rejected. They then appealed to the second highest court in the land, but were ruled against when the Federal Court of Appeals for the District of Columbia Circuit deferred to NRC's authority to not enforce its own safety regulations.

“Today’s unusual event at Palisades is yet another stark reminder that a powerful enough earthquake could unleash catastrophic amounts of hazardous radioactivity into Lake Michigan, the source of drinking water for millions of people downstream,” said Kevin Kamps of Beyond Nuclear, a national environmental group based in Takoma Park, Maryland.

Kamps also serves as board member of Don’t Waste Michigan, the state-wide anti-nuclear coalition, representing the Kalamazoo chapter. He is also a member of the Great Lakes United Nuclear-Free/Green Energy task force.

“We call for Palisades’ high-level radioactive wastes to be transferred out of the defective dry casks into hardened on-site storage in order to better safeguard them against earthquakes, before our luck runs out,” Kamps added.

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