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Exelon probing shutdown of Braidwood reactors

By Julie Wernau | Posted today at 12:39 p.m.

Exelon Corp. is investigating the cause of shutdowns this morning of two nuclear reactors at Braidwood Generating Station.

The Unit 2 turbine tripped off line at 2:06 a.m., followed 13 minutes later by a shutdown of the Unit 1 reactor.

Nuclear Regulatory Commission spokeswoman Prema Chandrathil said in the case of Unit 2, there was a problem with the path of the electrical current, which tripped the turbine and, in turn, the reactor.

In the case of Unit 1, she said, a secondary cooling system malfunctioned, which led steam to be released from the main release valve for cooling purposes. The unit was then manually shut down, she said.

“All of these steps went forward as designed, as engineered and as planned,” she said. “The utility and the NRC are investigating. We have to go ahead and try to determine what exactly happened there, and if (the two incidents) are connected.”

Chicago-based Exelon said environmental experts are testing condensate and water in the system for tritium – a radioactive form of hydrogen – which would have been released into the air with the steam. According to the NRC, tritium levels are likely to fall well below regulatory limits. The company said the shutdowns pose no threat to plant personnel or the public.

“As this happened overnight, we understand our neighbors may have heard the venting steam and we want to make sure they know there is no cause for concern. We appreciate their patience,” Braidwood Station Site Vice President Amir Shahkarami said in a statement.

Tritium occurs naturally but is produced in greater concentration in nuclear reactors. The isotope can increase the risk of cancer but is considered one of the least dangerous radioactive substances because it leaves the body quickly, according to the EPA.

This March, Exelon agreed to pay more than \$1 million to settle lawsuits filed by Atty. Gen. Lisa Madigan after the company allowed radioactive tritium to leak outside three nuclear power plants.

Leaks of tritium-contaminated water seeped into the ground around the company’s Braidwood, Byron and Dresden plants and, under orders from the state, the company

cleaned up contaminated groundwater, improved monitoring and ensured that wastewater was diluted enough to meet federal standards.

After the Braidwood contamination was revealed in 2006, the Nuclear Regulatory Commission cited Exelon for failing to respond properly to 22 leaks dating to 1996.

The nuclear plant is about 60 miles southwest of Chicago. At full power, its two reactors produce enough electricity to power 2 million homes. The NRC said the reactors will stay offline until the causes of the malfunctions are determined and fixed.

Read more about the topics in this post: [Braidwood](#), [Nuclear reactors](#)

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1.

2. **Skinny Dog** Today at 12:13 pm

3. We need to switch to liquid fluoride thorium reactor, or LFTRs. The whole world needs to. LFTRs don't have tritium-laced, super-heated water operating at 2,000 psi. LFTRs operate at atmospheric pressure, so if a LFTR does leak, the liquid fluoride drools out and cools instantly into an inert slag, like a trickle of lava. The slag doesn't evaporate into

the atmosphere or leach into the groundwater, and can be scooped up with a shovel (hint: wear gloves and a respirator.) And, LFTRs can consume the waste from other reactors as fuel. The “long-term” waste from a LFTR becomes completely non-radioactive in just 300 years, not 300,000 years. We need our national infrastructure rebuilt, and that includes our fleet of aging reactors.

4.

5. **RAK** Today at 12:40 pm

6. Another case of – The Pepsi Syndrome.