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**To:** Anne Boland  
**Date:** 2/17/06 4:04PM  
**Subject:** Braidwood article FYI

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February 15, 2006, 9:42 PM CST

Radioactive tritium leaks have been found at two more nuclear power plant sites, Exelon Nuclear announced Wednesday, only weeks after the company disclosed a series of spills at a Will County plant.

The leaks were discovered in recent weeks at Dresden Generating Station in Grundy County and Byron Nuclear Generating Station, about 25 miles southwest of Rockford.

So far, no tritium has been detected in groundwater off Exelon property near those plants, and the leaks "pose no health or safety threat," Exelon stated in its announcement.

But Rick Cobb, a hydrogeologist who is deputy manager of the Division of Water Supplies for the Illinois Environmental Protection Agency, said it is too early in his agency's investigation to confirm that assessment.

The disclosures come weeks after Exelon publicly revealed water containing tritium spilled four times between 1996 and 2003 from vacuum breakers on an underground pipe at Braidwood Generating Station in far southwest Will County.

Exelon detected groundwater tritium above levels permitted by the U.S. Environmental Protection Agency at two spots outside the plant.

Though tritium levels found in drinking wells near the Braidwood plant don't exceed those limits, tritium in one well was well above the normal "background" level. That's a violation of state "non-degradation standards," Cobb said.

Reacting to the disclosures Wednesday, U.S. Rep. Jerry Weller (R-Ill.), whose district includes the Braidwood and Dresden plants, wrote a letter to the chairman of the U.S. Nuclear Regulatory Commission.

Weller asked that the NRC conduct "an independent audit of all of the nuclear power facilities in Illinois with a strong emphasis on system components dealing with tritium."

A Washington-based anti-nuclear group also responded to the new disclosures.

"The way this information is leaking out is as disturbing as the radiation leaks themselves," said Paul Gunter, director of the Reactor Watchdog Project at the Nuclear Information and Resource Service.

Gunter's group joined 22 organizations and six individuals last month in petitioning the NRC to demand more information about alleged radioactive

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leaks at Braidwood, Dresden and five other nuclear facilities. The disclosed leaks are "just the tip of a tritium iceberg," he said.

Tritium, a byproduct of nuclear generation, can enter the body through ingestion, absorption or inhalation. Exposure can increase the risk of cancer, birth defects and genetic damage.

The EPA considers tritium to be among the least dangerous radioactive substances, in part because it leaves the body relatively quickly. But anti-nuclear activists have expressed concerns about the effects of chronic exposure.

The leak at Dresden is the second discovered there in recent years. Exelon officials discovered tritium contamination in fall 2004, when up to 650,000 gallons of water containing tritium leaked from underground pipes near the center of Exelon's 1,782-acre site. One test that year found tritium in the groundwater at levels more than 500 times the federal limit, according to Illinois EPA documents.

Tritium was measured in three off-site private wells south of the Dresden plant at levels higher than normal background after the 2004 leak, Cobb said.

In response to that leak, Exelon replaced a portion of underground pipe and installed more monitoring wells.

On Monday, a monitoring well showed tritium at levels 34 times higher than the federal limit, according to a NRC document.

Exelon said it suspects the new leak occurred in a portion of the underground pipe that was not replaced, the report states.

During the leak, water with tritium leaked at a rate of about one-half cup per minute, Exelon officials said.

It was discovered "within a few weeks after it began," according to the company's announcement.

After confirming the leak, Exelon stopped sending water with tritium through the pipe, said Bob Osgood, Exelon's spokesman at that facility. The pipe carries the water from a storage tank to an emergency cooling system, he said.

Meanwhile, Exelon recently began assessing systems that handle tritium at its 10 nuclear plants, seven of which are in Illinois.

At Byron, the assessment led to the discovery of water with tritium in five of six vaults that house vacuum breakers along an underground pipe that runs about 3 miles from the plant to the Rock River. Exelon is trying to determine if the tritium entered the ground outside the vaults.

Up to 300 gallons of water was found in one vault, and the highest tritium level was more than four times the federal limit, said Bob Kartheiser, spokesman for that plant.

The pipes at Byron and Braidwood carry water with tritium and other effluent to waterways, where the effluent is dumped with tritium at levels below federal limits, Exelon officials said.

New standards would be set for inspections, responses and remediation related to tritium leaks that could affect the environment or public, Exelon announced.

Also, Exelon scientists are looking for ways to reduce the amount of tritium produced at and released from the plants, the company announced.

"We recognize that inadvertent releases are unacceptable, and we are committed to eliminating them," said Exelon Nuclear Chief Operating Officer Charles Pardee.

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