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February 7, 2006  
BW060012

James L. Caldwell  
Regional Administrator  
U.S. Nuclear Regulatory Commission  
Region III  
2443 Warrenville Road  
Suite 210  
Lisle, IL 60532-4351

Braidwood Station, Units 1 and 2  
Facility Operating License Nos. NPF-72 and NPF-77  
NRC Docket Nos. STN 50-456 and STN 50-457

**Subject:** Cessation of Radioactive Discharges to the Kankakee River Through Blowdown Line

**References:** Letter to Illinois Environmental Protection Agency "Response to Violation Notice W-2005-00537," dated February 2, 2006

Letter from Illinois Environmental Protection Agency "Violation Notice: Exelon Generation - Braidwood Station," dated December 16, 2005

On February 2, 2006, Braidwood Station submitted the response to the violations identified in the referenced letter from the Illinois Environmental Protection Agency (EPA) dated December 16, 2005. As part of the violation response, Braidwood Station provided the following to the Illinois EPA.

Liquid radioactive effluent releases into the Braidwood Station circulating water blowdown line were suspended on November 23, 2005. This action was taken until additional information could be collected and testing conducted to ensure the integrity of the pipeline at all locations. Braidwood Station has not processed any liquid radioactive effluents through the circulating water blowdown pipeline since November 23, 2005.

As a result of suspending liquid radioactive effluent releases into the circulating water blowdown pipeline, temporary 20,000 gallon water storage tanks are being used to store liquid radioactive effluents onsite until new radioactive waste processing equipment is made operational.

Although there have been no liquid radioactive effluent releases through the circulating water blowdown pipeline since November 23, 2005, because the vacuum breaker valves installed along the length of the blowdown pipeline have been a source of leaks and spills, a daily visual inspection of the blowdown pipeline is being conducted to verify no gross leakage. The blowdown line is still being used for its primary purpose of maintaining proper lake chemistry by providing for turnover of the lake in conjunction with the circulating water make-up system.

Liquid effluents will not be introduced into the current circulating water blowdown pipeline unless leakage from this pipeline and vacuum breaker valves can be prevented with a high level of confidence. Exelon is currently exploring options for an alternate pipeline for discharge of liquid radioactive effluents that would maintain the current discharge point, but eliminate concerns with the existing circulating water blowdown pipeline and vacuum breaker valves.

The above actions will remain in effect until further notice. Communications with the Illinois EPA and the NRC will be performed prior to the discharge of any radioactivity through the blowdown line.

Should you have any questions concerning this letter, please contact Mr. Dale Ambler, Regulatory Assurance Manager, at (815) 417-2800.

Respectfully,

A handwritten signature in black ink, appearing to read "Keith J. Polson".

Keith J. Polson  
Site Vice President  
Braidwood Station

KJP/SB/vk

cc: NRC Senior Resident Inspector – Braidwood Station