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Braidwood Station  
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Braceville, IL 60407-9619  
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June 21, 2007  
BW070048

U. S. Nuclear Regulatory Commission  
Region III  
2443 Warrenville Road  
Suite 210  
Lisle, Illinois 60532-4352

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: 30-Day Report – Radiological Release Below Regulatory Reporting Limits

On May 23, 2007, high winds resulted in tritiated water located in a concrete lagoon to be deposited on the ground adjacent to the lagoon. In response to this event, the attached report of a radiological release below regulatory reporting limits is being submitted in accordance with the 30-day requirement per Station procedure LS-AA-1120, "Exelon Reportability Manual RAD 1.34 for Release of Radionuclides at Nuclear Power Plants."

No regulatory commitments are being made in this submittal.

For additional information regarding this report, contact Mr. James Petty, Acting Regulatory Assurance Manager, at (815) 417-2815.

Sincerely,



Gregory A. Boerschig  
Plant Manager  
Braidwood Station

### **Attachment: 30-Day Voluntary Report**

On May 23, 2007, high winds caused tritiated water from one of two concrete lagoons just west of the plant to lap over one side to the ground. Approximately 1,500 gallons of water was deposited to the ground. Tritium concentrations of the water in the west lagoon was approximately 75,000 picocuries per liter (pCi/L) when the event occurred. The spill was reported to State and Local agencies within 24 hours as required by the Exelon Reportability Manual RAD 1.34, "Release of Radionuclides at Nuclear Power Plants." No ENS notification was required per procedure.

There is no indication that the tritiated water that contacted the soil caused an unmonitored release of radioactive material from the site by traveling either overland or via groundwater. The Station will be tracking this spill under 10 CFR 50.75(g) and will be characterizing any dose considerations per the Offsite Dose Calculation Manual.

The Hydrogeologic Investigation Report completed in September 2006 established the groundwater gradients around the Braidwood site. The report concluded that groundwater flows northerly in the area of the spill. Station Engineering has proposed some new down gradient monitoring wells to provide adequate and early detection of any tritium migrating out of the Owner Controlled Area. These proposed wells are several hundred feet upgradient of the site property line. Although these monitoring wells are not installed yet, site-specific modeling shows that a spill of this magnitude will not migrate off site at a concentration above 200 pCi/L.