

September 7, 2006

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: RESUMPTION OF LIQUID RADIOACTIVE DISCHARGES THROUGH THE
BRAIDWOOD CIRCULATING WATER BLOWDOWN LINE

Dear Mr. Crane:

The NRC acknowledges the receipt of your letter dated September 1, 2006, in which you discussed your intent to resume routine liquid radioactive discharges through the circulating water blowdown line at the Braidwood Station beginning on or about October 1, 2006. This letter satisfies your commitment to communicate with the NRC prior to the future discharge of any radioactive releases through the Braidwood blowdown line (see letter from K. J. Polson to J. L. Caldwell, dated February 7, 2006).

The Region III staff has reviewed your planned resumption of liquid radioactive discharges at the Braidwood Station. We understand that you have implemented actions to ensure the integrity of the circulating water blowdown line, to minimize the potential for stresses on the vacuum breaker valves, and to provide early detection of any leakage through the vacuum breaker valves. As stated in your letter, the actions include: (1) operating with the blowdown line at positive pressures; (2) removing all but three vacuum breaker valves from operation; (3) installing an impermeable membrane in each of the vacuum breaker valve vaults; (4) installing a continuous moisture detection system; and (5) installing several groundwater monitoring wells along the blowdown line and implementing weekly inspections to enhance your monitoring and inspection program. We also understand, through a telephone conversation with Mr. Kenneth Ainger of your staff on September 6, 2006, that, prior to recommencing releases, your staff plans to complete the routine channel calibration for the radwaste discharge line inline radiation monitor, which had lapsed during the cessation of releases.

The NRC inspected the stated actions as part of our extensive review of your Interim Remediation Plan, which was documented in NRC Inspection Report No. 05000456/2006003; 05000457/2006003. Further, we have observed that the measures have been effective, to date, through our observations of those remediation activities, which included the discharges of tritium contaminated water from a pond through the circulating water blowdown line. We have also reviewed your procedures on the integrated response to radioactive leaks and spills that were implemented in response to the Notice of Violation concerning the historical

leaks from the vacuum breaker valves. These procedures provide added assurance that any leakage will be adequately resolved and assessed.

Notwithstanding, you are ultimately responsible for ensuring compliance with the requirements contained in 10 CFR Part 20 and the Braidwood license when performing liquid radioactive discharges to the environment. Based on the actions described above and inspected by the NRC, adequate measures appear to be in place for detection, response, and assessment of liquid radioactive material released through the blowdown line to assure the health and safety of the public and the environment. We have no further questions regarding your plans. However, we request that you notify us, through the onsite NRC resident inspector, of your specific schedule for resumption of releases, as this schedule is finalized.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

If you have any questions regarding this letter, please contact Mr. Steven Orth, Team Leader, Plant Support Team at (630) 829-9827.

Sincerely,

/RA/

James L. Caldwell
Regional Administrator

Docket Nos. 50-456; 50-457
License Nos. NPF-72 and NPF-77

cc: Site Vice President - Braidwood Station
Plant Manager - Braidwood Station
Regulatory Assurance Manager - Braidwood Station
Chief Operating Officer
Senior Vice President - Nuclear Services
Vice President - Operations Support
Director Licensing
Manager Licensing - Braidwood and Byron
Senior Counsel, Nuclear, Mid-West Regional
Operating Group
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
State Liaison Officer
Chairman, Illinois Commerce Commission

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James L. Caldwell
Regional Administrator

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- Plant Manager - Braidwood Station
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- Chief Operating Officer
- Senior Vice President - Nuclear Services
- Vice President - Operations Support
- Director Licensing
- Manager Licensing - Braidwood and Byron
- Senior Counsel, Nuclear, Mid-West Regional
Operating Group
- Document Control Desk - Licensing
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- Illinois Emergency Management Agency
- State Liaison Officer
- Chairman, Illinois Commerce Commission

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