Mr. Charles G. Pardee  
Chief Nuclear Officer and  
    Senior Vice President  
Exelon Nuclear  
Exelon Generation Company, LLC  
4300 Winfield Road  
Warrenville, IL 60555  

SUBJECT:  ANNUAL ASSESSMENT LETTER - BRAIDWOOD STATION, UNITS 1 AND 2  
(05000456/2008001; 05000457/2008001)  

Dear Mr. Pardee:  

On February 13, 2008, the NRC staff completed its performance review of Braidwood Station, Units 1 and 2. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2007. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.  

This performance review and enclosed inspection plan do not include security information. A separate letter designated and marked as "Official Use Only - Security Related Information" will include the security cornerstone review and resultant inspection plan.  

Overall, Braidwood Station Units 1 and 2 operated in a manner that preserved public health and safety and fully met all cornerstone objectives. Plant performance for the most recent quarter was within the Licensee Response column of the NRC’s Action Matrix, based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green). Therefore, we plan to conduct reactor oversight process (ROP) baseline inspections at your facility.  

While plant performance for the most recent quarter is within the Licensee Response column of the Action Matrix, there was a safety significant inspection finding affecting the first quarter of the assessment cycle. Specifically, Units 1 and 2 were in the Regulatory Response Column of the NRC’s Action Matrix for the first quarter of CY 2007 based on one White finding in the Public Radiation Safety Cornerstone for the failure to perform adequate and timely radiological evaluations following historical unplanned radioactive leaks from the station’s blow-down line vacuum breakers. On December 31, 2006, we were notified by your staff of your readiness for the NRC to conduct a supplemental inspection to review the actions taken to address the White finding in the Public Radiation Safety Cornerstone. We conducted Supplemental Inspection Procedure 95001 during the week of January 29, 2007. Based on the results of this inspection, no findings of significance were identified.
The enclosed inspection plan details the inspections, including baseline and other infrequently conducted inspections, less those related to security, scheduled through June 30, 2009. The inspection plan is provided to allow for the resolution of any scheduling conflicts and personnel availability issues well in advance of inspector arrival onsite. Routine resident inspections are not listed due to their ongoing and continuous nature. The inspections in the last nine months of the inspection plan are tentative and may be revised at the mid-cycle review.

In accordance with 10 CFR 2.390 of the NRC’s Rules of Practice, a copy of this letter and its enclosure will be made 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). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact Richard Skokowski at 630-829-9620 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Cynthia D. Pederson, Director
Division of Reactor Projects

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

Enclosure: Braidwood Inspection/Activity Plan

DISTRIBUTION
See next page

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(05000456/2008001; 05000457/2008001)

cc w/encl: Site Vice President - Braidwood Station
Plant Manager - Braidwood Station
Regulatory Assurance Manager - Braidwood Station
Chief Operating Officer and Senior Vice President
Senior Vice President - Midwest Operations
Senior Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director - Licensing and Regulatory Affairs
Manager Licensing - Braidwood, Byron and LaSalle
Associate General Counsel
Document Control Desk - Licensing
Assistant Attorney General
Illinois Emergency Management Agency
J. Klinger, State Liaison Officer
Chairman, Illinois Commerce Commission
Will County Executive
Will County Sheriff
Director, Will County Emergency Management Agency
Mayor of Joliet
City Manager of Joliet
Kendall County Board Chairman
Kendall County Sheriff
Grundy County Board Chairman
Grundy County Sheriff
Grundy County Emergency Management Agency
Mayor of Morris
Minooka Village President
Mayor of Coal City
Mayor of Carbon Hill
Mayor of Diamond
Mayor of Braidwood
Mayor of Wilmington
Channahon Village President
Channahon Village Administrator
Mayor of Shorewood
Shorewood Village Administrator
Mayor of Elwood
Mayor of Braceville
Mayor of Kankakee
INPO

SUBJECT: ANNUAL ASSESSMENT LETTER - BRAIDWOOD STATION, UNITS 1 AND 2
(05000456/2008001; 05000457/2008001)

DISTRIBUTION:
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MLC
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JLC1
MAS
JKH3
KGO
RML2
SRI Prairie Island
DRPIII
DRSIII
PLB1
TXN

ROPreports@nrc.gov (inspection reports, final SDP letters, any letter with an IR number)
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Enclosure: Braidwood Inspection/Activity Plan
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<tr>
<th>Unit Number</th>
<th>Inspection Activity</th>
<th>Title</th>
<th>No. of Staff on Site</th>
<th>Planned Dates Start</th>
<th>Planned Dates End</th>
<th>Inspection Type</th>
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<tbody>
<tr>
<td>BI RP</td>
<td>- RADIATION PROTECTION BASELINE INSPECTION</td>
<td>1 Radiation Monitoring Instrumentation and Protective Equipment</td>
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<td>03/14/2008</td>
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<td>- ENGINEERING MODIFICATIONS / 50.59 INS.</td>
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## Inspection / Activity Plan

### 03/01/2008 - 06/30/2009

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This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.