

March 2, 2007

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

SUBJECT: ANNUAL ASSESSMENT LETTER - BRAIDWOOD STATION, UNITS 1 AND 2  
(05000456/2007001; 05000457/2007001)

Dear Mr. Crane:

On February 14, 2007, 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, 2006. 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 physical protection information. A separate letter designated as "Exempt from Public Disclosure in Accordance with 10 CFR 2.390" and marked as "Official Use Only - Security-Related Information" will include the physical protection 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 Braidwood, Units 1 and 2 for the most recent quarter was within the Regulatory Response Column of the NRC's Action Matrix, based on one inspection finding being classified as having low to moderate significance (White) in the public radiation safety cornerstone. In our mid-cycle assessment letter we informed you that we would conduct a supplemental inspection using Inspection Procedure 95001, "Inspection for One or Two White inputs in a Strategic performance Area," because of the White finding.

Immediately after the end of the assessment period we conducted the supplemental inspection during the week of January 29, 2007. The results of that inspection will be issued in a separate report. Because we have already conducted the supplemental inspection, early in the 2007 assessment cycle, we plan only to conduct reactor oversight process baseline inspections at your facility.

The enclosed inspection plan details the inspections, less those related to physical protection scheduled through June 30, 2008. 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 9 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), 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/**

Mark A. Satorius, Director  
Division of Reactor Projects

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

Enclosure: Braidwood Station Inspection/Activity Plan

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Mark A. Satorius, Director  
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NAME	DLords*.dtp	DSmith*	RSkokowski*	MSatorius
DATE	02/28/2007	02/28/2007	02/28/2007	03/02/07

**OFFICIAL RECORD COPY**

cc w/encl: 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  
Vice President - Licensing and Regulatory Affairs  
Director Licensing  
Manager Licensing - Braidwood and Byron  
Senior Counsel, Nuclear, Mid-West Regional  
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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  
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Mayor of Carbon Hill  
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PLB1

TXN

**Braidwood**  
**Inspection / Activity Plan**  
**03/01/2007 - 06/30/2008**

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	<b>PI &amp; R</b>	<b>- PROBLEM IDENTIFICATION AND RESOLUTION</b>	<b>4</b>			
1,2	IP 71152B	Identification and Resolution of Problems		03/12/2007	03/30/2007	Baseline Inspections
	<b>71122.02</b>	<b>- MATERIAL PROCESSING AND TRANSPORATION</b>	<b>1</b>			
1,2	IP 7112202	Radioactive Material Processing and Transportation		03/19/2007	03/23/2007	Baseline Inspections
	<b>71122.01</b>	<b>- RAD EFFLUENTS</b>	<b>1</b>			
1,2	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		04/30/2007	05/04/2007	Baseline Inspections
1,2	IP 71151	Performance Indicator Verification		04/30/2007	05/04/2007	Baseline Inspections
	<b>71121.01</b>	<b>- ACCESS CONTROL</b>	<b>2</b>			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		06/11/2007	06/15/2007	Baseline Inspections
	<b>CDBI</b>	<b>- COMPONENT DESIGN BASES INSPECTION</b>	<b>6</b>			
1,2	IP 7111121	Component Design Bases Inspection		07/23/2007	08/24/2007	Baseline Inspections
	<b>7111111B</b>	<b>- LIC OPERATOR REQUAL TRAINING PROG INSP</b>	<b>4</b>			
1,2	IP 7111111B	Licensed Operator Requalification Program		08/27/2007	08/31/2007	Baseline Inspections
	<b>71122.03</b>	<b>- REMP AND RAM CONTROL</b>	<b>1</b>			
1,2	IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control P		08/27/2007	08/31/2007	Baseline Inspections
	<b>71121.02</b>	<b>- ALARA - OUTAGE</b>	<b>1</b>			
1,2	IP 7112102	ALARA Planning and Controls		10/08/2007	10/19/2007	Baseline Inspections
	<b>ISI</b>	<b>- ISI BASELINE INSPECTION</b>	<b>1</b>			
1	IP 7111108P	Inservice Inspection Activities - PWR		10/08/2007	10/26/2007	Baseline Inspections
	<b>FY 2008</b>	<b>- BRAIDWOOD INIT PREP 11/2007</b>	<b>3</b>			
1	W90172	OL - INITIAL EXAM - BRAIDWOOD - NOV/DEC 2007		10/22/2007	10/26/2007	Not Applicable
	<b>FY 2008</b>	<b>- BRAIDWOOD INIT EXAM 12/2007</b>	<b>3</b>			
1	W90172	OL - INITIAL EXAM - BRAIDWOOD - NOV/DEC 2007		12/03/2007	12/14/2007	Not Applicable
	<b>RP BI</b>	<b>- RAD PROTECTION INSTRUMENTATION</b>	<b>1</b>			
1,2	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		03/10/2008	03/14/2008	Baseline Inspections
	<b>ISI</b>	<b>- ISI INSPECTION</b>	<b>1</b>			
2	IP 7111108P	Inservice Inspection Activities - PWR		04/21/2008	05/16/2008	Baseline Inspections
	<b>BI</b>	<b>- OUTAGE ACCESS CONTROL AND ALARA</b>	<b>1</b>			
1	IP 7112101	Access Control to Radiologically Significant Areas		04/28/2008	05/02/2008	Baseline Inspections
1	IP 7112102	ALARA Planning and Controls		04/28/2008	05/02/2008	Baseline Inspections
	<b>RPV HEAD</b>	<b>- RPV HEAD DROP CALCS</b>	<b>1</b>			
1,2	IP 7111120	Refueling and Other Outage Activities		05/26/2008	07/04/2008	Baseline Inspections