

August 31, 2007

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

SUBJECT: MID-CYCLE PERFORMANCE REVIEW AND INSPECTION PLAN -  
BRAIDWOOD STATION

Dear Mr. Crane:

On August 14, 2007, the NRC staff completed its performance review of the Braidwood Station for the first half of the calendar year (CY) 2007 assessment cycle. Our technical staff reviewed performance indicators (PIs) for the most recent quarter and inspection results over the previous 12 months. 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.

Plant performance for the most recent quarter at the Braidwood Nuclear Generating Plant Units 1 and 2 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.

The enclosed inspection plan details the inspections, less those related to security, scheduled through December 31, 2008. Significant inspections planned include a Biennial Problem Identification and Resolution inspection in October 2008, and an Evaluation of Changes, Tests, or Experiments and Permanent Plant Modifications inspection in November 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 nine months of the inspection plan are tentative and may be revised at the end-of-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 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).

The NRC is currently evaluating the scope and frequency of all the baseline inspection procedures. If the results of the evaluation, or any other circumstances, cause us to change the inspection plan, we will contact you to discuss the change as soon as possible. Please contact Richard A. Skokowski at (630) 829-9620 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

*/RA by A. H. Hsia for/*

Cynthia D. Pederson, Director  
Division of Reactor Projects

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

Enclosure: Braidwood Station Inspection/Activity Plan

DISTRIBUTION:

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Letter to C. Crane from C. Pederson dated August 31, 2007

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BRAIDWOOD STATION

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  
Operating Group  
Document Control Desk - Licensing  
Assistant Attorney General  
Illinois Emergency Management Agency  
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

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BRAIDWOOD STATION

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RML2

SAM9

SRI Braidwood

DRPIII

DRSIII

PLB1

TXN

**Braidwood**  
**Inspection / Activity Plan**  
**09/01/2007 - 12/31/2008**

Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	End	Inspection Type
<b>BI RP</b>	<b>- RADIATION PROTECTION BASELINE INSPECTION</b>	<b>1</b>			
IP 7112102	ALARA Planning and Controls		10/08/2007	10/19/2007	Baseline Inspections
<b>BI ENG</b>	<b>- ENGINEERING INSERVICE INSPECTION</b>	<b>1</b>			
IP 7111108P	Inservice Inspection Activities - PWR		10/08/2007	10/26/2007	Baseline Inspections
<b>OL EXAM</b>	<b>- EXAM PREPARATION 11/2007</b>	<b>3</b>			
W90172	OL - INITIAL EXAM - BRAIDWOOD - NOV/DEC 2007		10/22/2007	10/26/2007	Not Applicable
<b>OL EXAM</b>	<b>- INITIAL LICENSING EXAM 12/2007</b>	<b>3</b>			
W90172	OL - INITIAL EXAM - BRAIDWOOD - NOV/DEC 2007		12/03/2007	12/14/2007	Not Applicable
<b>BI RP</b>	<b>- RADIATION PROTECTION BASELINE INSPECTION</b>	<b>1</b>			
IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		03/10/2008	03/14/2008	Baseline Inspections
<b>BI RP</b>	<b>- RADIATION PROTECTION BASELINE INSPECTION</b>	<b>1</b>			
IP 7112101	Access Control to Radiologically Significant Areas		04/28/2008	05/02/2008	Baseline Inspections
IP 7112102	ALARA Planning and Controls		04/28/2008	05/02/2008	Baseline Inspections
<b>BI ENG</b>	<b>- ENGINEERING INSERVICE INSPECTION</b>	<b>1</b>			
IP 7111108P	Inservice Inspection Activities - PWR		04/21/2008	05/16/2008	Baseline Inspections
<b>BI ENG</b>	<b>- BIENNIAL MAINTENANCE EFFECTIVENESS INSP.</b>	<b>1</b>			
IP 7111112B	Maintenance Effectiveness		07/21/2008	07/25/2008	Baseline Inspections
<b>BI ENG</b>	<b>- BIENNIAL HEAT SINK INSPECTION</b>	<b>1</b>			
IP 7111107B	Heat Sink Performance		08/04/2008	08/08/2008	Baseline Inspections
<b>BI RP</b>	<b>- RADIATION PROTECTION BASELINE INSPECTION</b>	<b>1</b>			
IP 7112202	Radioactive Material Processing and Transportation		09/22/2008	09/26/2008	Baseline Inspections
IP 71151-BI01	Reactor Coolant System Activity		09/22/2008	09/26/2008	Baseline Inspections
IP 71151-OR01	Occupational Exposure Control Effectiveness		09/22/2008	09/26/2008	Baseline Inspections
IP 71151-PR01	RETS/ODCM Radiological Effluent		09/22/2008	09/26/2008	Baseline Inspections
<b>BI PI&amp;R</b>	<b>- BIENNIAL PI&amp;R INSPECTION</b>	<b>3</b>			
IP 71152B	Identification and Resolution of Problems		10/06/2008	10/24/2008	Baseline Inspections
<b>BI ENG</b>	<b>- ENGINEERING MODIFICATIONS / 50.59 INSP.</b>	<b>2</b>			
IP 7111102	Evaluation of Changes, Tests, or Experiments		11/03/2008	11/21/2008	Baseline Inspections
IP 7111117B	Permanent Plant Modifications		11/03/2008	11/21/2008	Baseline Inspections
<b>BI EP</b>	<b>- EP EXERCISE INSPECTION / PI VERIFICATION</b>	<b>3</b>			
IP 7111401	Exercise Evaluation		11/17/2008	11/21/2008	Baseline Inspections
IP 71151-EP01	Drill/Exercise Performance		11/17/2008	11/21/2008	Baseline Inspections
IP 71151-EP02	ERO Drill Participation		11/17/2008	11/21/2008	Baseline Inspections
IP 71151-EP03	Alert & Notification System		11/17/2008	11/21/2008	Baseline Inspections