

August 31, 2006

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 7, 2006, the NRC staff completed its performance review of the Braidwood Station for the first half of the calendar year 2006 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 physical protection information. A separate letter designated and marked as "Exempt from Public Disclosure in Accordance with 10 CFR 2.390" will include the physical protection review and resultant inspection plan.

Plant performance 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. The White finding and related violation were finalized in a letter dated June 29, 2006, and were related to the failure to perform adequate and timely radiological evaluations following historical unplanned radioactive leaks from the station's blowdown line vacuum breakers. This failure impacted the station's ability to assess the environmental impact from the releases, to mitigate the releases, properly account for public impact, and adequately control licensed material. A supplemental inspection using Inspection Procedure 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," is tentatively planned to be conducted in the fourth quarter of 2006, pending the completion of your planned corrective actions.

The enclosed inspection plan details the inspections, less those related to physical protection scheduled through March 31, 2008. Significant inspections planned include a "Unit 2 ISI and Temporary Instruction 150 Reactor Pressure Vessel Head and Vessel Head Penetration Nozzle Inspection" in October 2006, a "Problem Identification and Resolution Inspection" in November 2006, and a "Modifications/50.59 Inspection" in January 2007. In addition, the resident inspectors plan to perform Temporary Inspections 2515/169, "Mitigating Systems Performance Index (MSPI) Verification," in September 2006, and 2515/166, "Pressurized

Water Reactor Containment Sump Blockage,” to be completed on Unit 1 in October 2007, and Unit 2 in spring 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 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).

If circumstances arise which 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/

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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NAME	RSkokowski:dtp		MSatorius				
DATE	08/30/06		08/31/06				

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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
Mayor of Morris
Minooka Village President
Mayor of Coal City
Mayor of Carbon Hill
Mayor of Diamond
Mayor of Braidwood
Mayor of Wilmington
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Braidwood
Inspection / Activity Plan
09/01/2006 - 03/31/2008

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	ISI	- BRAIDWOOD UNIT 2 ISI & TI-150 INSPECTION	2			
2	IP 2515/150	Reactor Pressure Vessel Head and Vessel Head Penetration Nozzles (NRC ORDER EA-03-		10/16/2006	11/03/2006	Safety Issues
2	IP 7111108P	Inservice Inspection Activities - PWR		10/16/2006	11/03/2006	Baseline Inspections
	OUTAGE	- ACCESS CONTROL, ALARA	1			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		10/16/2006	10/20/2006	Baseline Inspections
1,2	IP 7112102	ALARA Planning and Controls		10/16/2006	10/20/2006	Baseline Inspections
1,2	IP 71151	Performance Indicator Verification		10/16/2006	10/20/2006	Baseline Inspections
	H/S	- HEAT SINK INSPECTION	1			
1,2	IP 7111107B	Heat Sink Performance		11/06/2006	11/11/2006	Baseline Inspections
	PI&R	- PROBLEM IDENTIFICATION AND RESOLUTION	3			
1,2	IP 71152B	Identification and Resolution of Problems		11/27/2006	12/15/2006	Baseline Inspections
	MOD5059	- MODIFICATIONS/50.59 INSPECTION	2			
1,2	IP 7111102	Evaluation of Changes, Tests, or Experiments		01/08/2007	01/26/2007	Baseline Inspections
1,2	IP 7111117B	Permanent Plant Modifications		01/08/2007	01/26/2007	Baseline Inspections
	EP BI	- BASELINE EP INSPECTION	1			
1,2	IP 7111402	Alert and Notification System Testing		01/22/2007	01/26/2007	Baseline Inspections
1,2	IP 7111403	Emergency Response Organization Augmentation Testing		01/22/2007	01/26/2007	Baseline Inspections
1,2	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		01/22/2007	01/26/2007	Baseline Inspections
1,2	IP 71151	Performance Indicator Verification		01/22/2007	01/26/2007	Baseline Inspections
	BI	- MATERIAL PROCESSING AND TRANSPORTATION	1			
1,2	IP 7112202	Radioactive Material Processing and Transportation		02/12/2007	02/16/2007	Baseline Inspections
	71122.01	- RAD EFFLUENTS	1			
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
	71121.01	- ACCESS CONTROL	2			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		06/11/2007	06/15/2007	Baseline Inspections
	CDBI	- COMPONENT DESIGN BASES INSPECTION	5			
1,2	IP 7111121	Component Design Bases Inspection		07/23/2007	08/24/2007	Baseline Inspections
	71111.11	- LIC OPERATOR REQUAL PROGRAM EVALUATION	2			
1,2	IP 7111111B	Licensed Operator Requalification Program		08/27/2007	08/31/2007	Baseline Inspections
	71122.03	- REMP AND RAM CONTROL	1			
1,2	IP 7112203	Radiological Environmental Monitoring Program (REMP) And Radioactive Material Control P		08/27/2007	08/31/2007	Baseline Inspections
	71121.02	- ALARA - OUTAGE	1			
1,2	IP 7112102	ALARA Planning and Controls		10/08/2007	10/19/2007	Baseline Inspections

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

Braidwood
Inspection / Activity Plan
09/01/2006 - 03/31/2008

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	ISI - ISI BASELINE INSPECTION		1			
1	IP 7111108P	Inservice Inspection Activities - PWR		10/08/2007	10/26/2007	Baseline Inspections
	FY 2008 - BRAIDWOOD INIT PREP 11/2007		2			
1	W90172	OL - INITIAL EXAM - BRAIDWOOD - NOV/DEC 2007		11/12/2007	11/16/2007	Not Applicable
	MAINRULE - MAINTENANCE RULE INSPECTION		2			
1, 2	IP 7111112B	Maintenance Effectiveness		11/26/2007	11/30/2007	Baseline Inspections
	FY 2008 - BRAIDWOOD INIT EXAM 12/2007		2			
1	W90172	OL - INITIAL EXAM - BRAIDWOOD - NOV/DEC 2007		12/03/2007	12/14/2007	Not Applicable
	HEATSINK - HEAT SINK INSPECTION		1			
1, 2	IP 7111107B	Heat Sink Performance		02/04/2008	02/08/2008	Baseline Inspections
	BI - OUTAGE ACCESS CONTROL AND ALARA		1			
1	IP 7112101	Access Control to Radiologically Significant Areas		03/17/2008	03/21/2008	Baseline Inspections
1	IP 7112102	ALARA Planning and Controls		03/17/2008	03/21/2008	Baseline Inspections