

March 2, 2005

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
(REPORT 05000456/200501; 05000457/200501)

Dear Mr. Crane:

On February 9, 2005, the NRC staff completed its end-of-cycle plant performance assessment of Braidwood Station Units 1 and 2. The end-of-cycle review for Braidwood Station involved the participation of the reactor technical divisions in evaluating performance indicators (PIs) for the most recent quarter and inspection results for the period from January 1 through December 31, 2004. 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 so that you will have an opportunity to prepare for these inspections and to inform us of any planned inspections that may conflict with your plant activities.

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.

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 only baseline inspections at your facility through September 30, 2006.

While performance of both Units during the most recent quarter was within the licensee response column of the Action Matrix, there was a safety significant PI during the first quarter of the assessment cycle for Unit 1. The Mitigating Systems Unavailability, Heat Removal Systems (Auxiliary Feedwater - AFW) PI for Unit 1 was White during the first quarter of the assessment cycle. NRC Supplemental Inspection Procedure 95001, "Inspection for One or Two White Inputs in a Strategic Performance Area," was completed in May 2004 and documented in NRC Inspection Report 50-456/04-05. There were no findings identified and this PI returned to Green for the remaining three quarters of the assessment cycle.

The enclosed inspection plan details the inspections, less those related to physical protection scheduled through September 30, 2006. The following infrequently performed inspections are planned to commence during the months shown: Modifications and 10 CFR 50.59 inspection in March 2005, Safety System Design and Performance Capability inspection in August 2005, Problem Identification and Resolution inspection in October 2005, Temporary Instruction (TI) 2515/150, "Reactor Pressure Vessel Head and Vessel Head Penetration Nozzles" (Unit 1) in April 2006, and Triennial Fire Protection inspection in July 2006. The inspection plan is provided to minimize the resource impact on your staff and to allow for scheduling conflicts and personnel availability to be resolved 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 meeting.

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 me at (630) 829-9872 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Dave Passehl, Acting Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Braidwood Station Units 1 and 2 Inspection/Activity Plan

See Attached Distribution

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Dave Passehl, Acting Chief
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Institute of Nuclear Power Operations (INPO)

Braidwood
Inspection / Activity Plan
03/01/2005 - 09/30/2006

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	MOD/5059 - MODIFICATIONS/50.59 INSPECTION		5			
1,2	IP 7111102	Evaluation of Changes, Tests, or Experiments		03/14/2005	03/18/2005	Baseline Inspections
1,2	IP 711117B	Permanent Plant Modifications		03/14/2005	03/18/2005	Baseline Inspections
	OUTAGE - ACCESS CONTROL, ALARA		1			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		04/18/2005	04/29/2005	Baseline Inspections
1,2	IP 7112102	ALARA Planning and Controls		04/18/2005	04/29/2005	Baseline Inspections
	71122.01 - EFFLUENTS AND ACCESS CONTROL		1			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		07/11/2005	07/15/2005	Baseline Inspections
1,2	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		07/11/2005	07/15/2005	Baseline Inspections
1,2	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		07/11/2005	07/15/2005	Baseline Inspections
	MAINT - BIENNIAL MAINTENANCE RULE INSPECTION		1			
1,2	IP 711112B	Maintenance Effectiveness		08/08/2005	08/12/2005	Baseline Inspections
	SSDPC - SAFETY SYSTEM DESIGN & PERFORMANCE		6			
1,2	IP 7111121	Safety System Design and Performance Capability		08/15/2005	09/02/2005	Baseline Inspections
	71114 - BASELINE EP INSPECTION		1			
1,2	IP 7111402	Alert and Notification System Testing		08/08/2005	08/12/2005	Baseline Inspections
1,2	IP 7111403	Emergency Response Organization Augmentation Testing		08/08/2005	08/12/2005	Baseline Inspections
1,2	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies		08/08/2005	08/12/2005	Baseline Inspections
1,2	IP 71151	Performance Indicator Verification		08/08/2005	08/12/2005	Baseline Inspections
	71122.03 - REMP, PI VERIFICATION		1			
1,2	IP 7112203	Radiological Environmental Monitoring Program		08/22/2005	08/26/2005	Baseline Inspections
1,2	IP 71151	Performance Indicator Verification		08/22/2005	08/26/2005	Baseline Inspections
	71111.11 - LIC OPERATOR REQUAL PROGRAM EVALUATION		2			
1,2	IP 7111111B	Licensed Operator Requalification Program		09/12/2005	09/16/2005	Baseline Inspections
	PI&R - PROBLEM IDENTIFICATION AND RESOLUTION		3			
1,2	IP 71152B	Identification and Resolution of Problems		10/16/2005	11/04/2005	Baseline Inspections
	ISI - BRAIDWOOD UNIT 1 ISI & TI-150 INSPECTION		2			
1	IP 2515/150	Reactor Pressure Vessel Head and Vessel Head Penetration Nozzles (NRC Bulletin 2002-02		04/10/2006	04/27/2006	Safety Issues
1	IP 7111108P	Inservice Inspection Activities - PWR		04/10/2006	04/27/2006	Baseline Inspections
	OUTAGE - ALARA, ACCESS CONTROL		1			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		04/10/2006	04/21/2006	Baseline Inspections
1,2	IP 7112102	ALARA Planning and Controls		04/10/2006	04/21/2006	Baseline Inspections
	FPI - TRIENNIAL FIRE PROTECTION INSPECTION		3			
1,2	IP 7111105T	Fire Protection		07/24/2006	08/11/2006	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
03/01/2005 - 09/30/2006

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates Start	Planned Dates End	Inspection Type
	IP 71114	- EP EXERCISE BASELINE	2			
1,2	IP 7111401	Exercise Evaluation		08/07/2006	08/11/2006	Baseline Inspections
1,2	IP 71151	Performance Indicator Verification		08/07/2006	08/11/2006	Baseline Inspections
	ROUTINE	- INSTRUMENTATION, ACCESS CONTROL	1			
1,2	IP 7112101	Access Control to Radiologically Significant Areas		08/07/2006	08/11/2006	Baseline Inspections
1,2	IP 7112103	Radiation Monitoring Instrumentation and Protective Equipment		08/07/2006	08/11/2006	Baseline Inspections