



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

March 5, 2012

Mr. Michael J. Pacilio
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: ANNUAL ASSESSMENT LETTER FOR BRAIDWOOD STATION, UNITS 1 AND 2
(REPORT 05000456/2011007 AND 05000457/2011007)

Dear Mr. Pacilio:

On February 14, 2012, the Nuclear Regulatory Commission (NRC) staff completed its end-of-cycle performance review of Braidwood Station, Units 1 and 2. The NRC reviewed the most recent quarterly performance indicators (PIs) in addition to inspection results and enforcement actions from January 1, 2011, through December 31, 2011. This letter informs you of the NRC's assessment of your facility during this period and its plans for future inspections at your facility. This performance review and enclosed inspection plan do not include security information. A separate letter will include the NRC's assessment of your performance in the Security Cornerstone and its security-related inspection plan.

The NRC determined that overall, Braidwood Station, Units 1 and 2, operated in a manner that preserved public health and safety and met all cornerstone objectives. Plant performance for the most recent quarter, as well as the first three quarters of the assessment period, at Braidwood Station, Units 1 and 2, was within the Licensee Response column of the NRC's Reactor Oversight Process (ROP) 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, the NRC plans to conduct ROP baseline inspections at Braidwood Station. We also plan to conduct infrequently performed and temporary instruction inspections at your facility. These inspections include a follow-up inspection using IP 92723, "Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the Same Area in a 12 Month Period," to evaluate your corrective actions and extent of condition review related to a Steam Generator Margin-to-Overflow Backfit [ML110320508] that was issued. Temporary Instruction 182, "Review of the Implementation of an Industry Initiative to Control the Degradation of Underground Piping and Tanks," will also be conducted at Braidwood Station.

The enclosed inspection plan lists the inspections scheduled through June 30, 2013. Routine inspections performed by resident inspectors are not included in the inspection plan. The inspections listed during the last 9 months of the inspection plan are tentative and may be revised at the mid-cycle performance review. The NRC provides the inspection plan to allow for the resolution of any scheduling conflicts and personnel availability issues. The NRC will contact you as soon as possible to discuss changes to the inspection plan should circumstances warrant any changes.

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).

Please contact me at (630) 829-9620 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA/

Eric R. Duncan, Chief
Branch 3
Division of Reactor Projects

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

Enclosure: Braidwood Station Inspection/Activity Plan

cc w/encl: Distribution via LlstServ

Braidwood
Inspection / Activity Plan
01/01/2012 - 06/30/2013

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		FOLLOWUP - MARGIN TO OVERFILL BACKFIT CA/EOC RVW		1
01/02/2012	02/29/2012	IP 92723	Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the S	
		TI-182 - TI-2515/182 PHASE I - BURIED PIPING		1
02/27/2012	02/29/2012	IP 2515/182	Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping	
		BI EPX - EP EXERCISE INSPECTION / PI VERIFICATION		2
03/05/2012	03/09/2012	IP 7111401	Exercise Evaluation	
03/05/2012	03/09/2012	IP 71151	Performance Indicator Verification	
		FOLLOWUP - MARGIN TO OVERFILL BACKFIT CA/EOC RVW		1
11/01/2012	12/20/2012	IP 92723	Follow Up Inspection for Three or More Severity Level IV Traditional Enforcement Violations in the S	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
04/16/2012	04/20/2012	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
04/16/2012	04/20/2012	IP 71124.02	Occupational ALARA Planning and Controls	
		BI ISI - INSERVICE INSPECTION - UNIT 1		2
04/16/2012	05/09/2012	IP 7111108P	Inservice Inspection Activities - PWR	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
06/04/2012	06/08/2012	IP 71124.03	In-Plant Airborne Radioactivity Control and Mitigation	
06/04/2012	06/08/2012	IP 71124.04	Occupational Dose Assessment	
06/04/2012	06/08/2012	IP 71151-OR01	Occupational Exposure Control Effectiveness	
		BI PI&R - BIENNIAL PI&R INSPECTION		4
06/11/2012	06/29/2012	IP 71152B	Problem Identification and Resolution	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
06/25/2012	06/29/2012	IP 71124.07	Radiological Environmental Monitoring Program	
06/25/2012	06/29/2012	IP 71151-PR01	RETS/ODCM Radiological Effluent	
		INSP - OP EXP SS FY2007-03 POLAR CRANE SFP EQUI		1
06/25/2012	07/13/2012	IP 7111120	Refueling and Other Outage Activities	
		BI FIRE - FIRE PROTECTION INSPECTION & BAG TRIP		3
07/23/2012	08/24/2012	IP 7111105T	Fire Protection [Triennial]	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
08/20/2012	08/24/2012	IP 71124.08	Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation	
08/20/2012	08/24/2012	IP 71151-BI01	Reactor Coolant System Activity	
		BI OLRQ - REQUALIFICATION PROGRAM INSPECTION		1
09/17/2012	09/21/2012	IP 7111111A	Licensed Operator Requalification Program - Annual Review	

Braidwood
Inspection / Activity Plan
01/01/2012 - 06/30/2013

Planned Dates		Inspection Activity	Title	No. of Staff on Site
Start	End			
		BI ISI - INSERVICE INSPECTION - UNIT 2		2
10/15/2012	11/02/2012	IP 7111108P	Inservice Inspection Activities - PWR	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		2
10/22/2012	10/26/2012	IP 71124.01	Radiological Hazard Assessment and Exposure Controls	
10/22/2012	10/26/2012	IP 71124.02	Occupational ALARA Planning and Controls	
		BI EPR - EP ROUTINE INSPECTION / PI VERIFICATION		2
02/11/2013	02/15/2013	IP 7111402	Alert and Notification System Testing	
02/11/2013	02/15/2013	IP 7111403	Emergency Preparedness Organization Staffing and Augmentation System	
02/11/2013	02/15/2013	IP 7111405	Correction of Emergency Preparedness Weaknesses and Deficiencies	
02/11/2013	02/15/2013	IP 71151	Performance Indicator Verification	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
02/25/2013	03/01/2013	IP 71124.06	Radioactive Gaseous and Liquid Effluent Treatment	
02/25/2013	03/01/2013	IP 71151-PR01	RETS/ODCM Radiological Effluent	
		OL PREP - BRAIDWOOD INIT PREP 03/2013		3
02/25/2013	02/28/2013	W90281	OL - INITIAL EXAM - 2013 MAR-APR - BRAIDWOOD	
		BI CDBI - COMPONENT DESIGN BASIS INSPECTION		6
05/20/2013	06/21/2013	IP 7111121	Component Design Bases Inspection	
		OL EXAM - BRAIDWOOD INIT EXAM 03/2013		3
03/25/2013	04/05/2013	W90281	OL - INITIAL EXAM - 2013 MAR-APR - BRAIDWOOD	
		BI RP - RADIATION PROTECTION BASELINE INSPECTION		1
04/22/2013	04/26/2013	IP 71124.05	Radiation Monitoring Instrumentation	
04/22/2013	04/26/2013	IP 71151-BI02	Reactor Coolant System Leakage	

M. Pacilio

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Letter to M. Pacilio from E. Duncan dated March 5, 2012.

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(REPORT 05000456/2011007 AND 05000457/2011007)

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