



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

August 6, 2012

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

**SUBJECT: ASSESSMENT FOLLOW-UP LETTER FOR BRAIDWOOD STATION UNIT 2**

Dear Mr. Pacilio:

As a result of our quarterly review of plant performance, which was completed on July 31, 2012, the NRC updated its assessment of Braidwood Station Unit 2. The NRC's evaluation consisted of a review of performance indicators and inspection results. This letter informs you of the NRC's assessment of Braidwood Station Unit 2 and its plans for a future inspection at your facility. This letter supplements, but does not supersede, the annual assessment letter issued on March 5, 2012 (ADAMS Accession No. ML12065A102).

The NRC's review of Braidwood Unit 2 identified that the Mitigating System Performance Index for the Cooling Water Support System has crossed the Green-to-White threshold. This was due to probabilistic risk assessment model change errors, operating restrictions on the cooling water support system, and equipment failures.

The NRC determined the performance at Braidwood Station Unit 2 to be in the Regulatory Response Column of the Reactor Oversight Process Action Matrix beginning in the second quarter of 2012 based on the PI data reported to the NRC. Therefore, the NRC plans to conduct a supplemental inspection in accordance with Inspection Procedure 95001, "Supplemental Inspection for One or Two White Inputs in a Strategic Performance Area," to provide assurance that the root causes and contributing causes of risk-significant performance issues are understood, that the extent of condition and cause is identified, and to ensure the licensee's corrective actions for risk-significant performance issues are sufficient to address the root and contributing causes and prevent recurrence. The NRC requests that your staff provide notification of your readiness for the NRC to conduct this supplemental inspection.

M. Pacilio

-2-

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Please contact Eric Duncan at 630-829-9620 with any questions you may have regarding this letter.

Sincerely,

**/RA/**

Gary L. Shear, Acting Director  
Division of Reactor Projects

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M. Pacilio

-2-

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Letter to M. Pacilio from G. Shear dated August 6, 2012.

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