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April 30, 1996

United States Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D. C. 20555-0001

Subject: Cycle 6 Operating Limits Report  
Braidwood Nuclear Power Station, Unit 2  
Facility Operating License Number NPF-77  
NRC Docket No. 50-457

Ladies and Gentlemen:

Commonwealth Edison Company's (ComEd's) Braidwood Nuclear Power Station Unit 2 (Unit 2) has recently completed its 5th cycle of operation and is currently preparing for Cycle 6 startup. The estimated Cycle 6 startup date is May 7, 1996. The purpose of this letter is to advise the United States Nuclear Regulatory Commission (USNRC) of ComEd's review of the Cycle 6 reload under the provisions of Title 10, Code of Federal Regulations, Part 50 Section 59 (10CFR50.59) and to transmit the Operating Limits Report (OLR) for the upcoming cycle consistent with Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications," dated October 4, 1988.

The Braidwood Unit 2 core consists of USNRC approved fuel designs, and was designed to operate within approved fuel design criteria, Technical Specifications and related bases such that:

- 1) core operating characteristics will be equivalent to or less limiting than those previously reviewed and accepted; or
- 2) re-analyses or re-evaluations have been performed to demonstrate that the limiting postulated Updated Final Safety Analysis Report (UFSAR) events which could be affected by the reload are within allowable limits.

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Consistent with past reloads, the reload licensing analyses performed for Cycle 6 used USNRC-approved methodologies. The fresh fuel to be loaded in Cycle 6 consists of 84 VANTAGE 5 fuel assemblies. There are 68 Region 8A assemblies with 4.60 weight percent uranium-235 (w/o U-235) enrichment and 16 Region 8B assemblies with 4.40 w/o U-235 enrichment. The cycle-specific power distribution limits for Cycle 6 are presented in the attached OLR.

ComEd has performed a detailed review of the relevant reload licensing documents, the associated bases, and references. Based on that review, a safety evaluation was prepared, as required by 10CFR50.59, which concluded that the reload presents no unreviewed safety

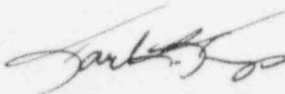
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questions and requires no Technical Specification changes. The Braidwood On-Site Review of the reload 10CFR50.59 has been completed.

Finally, further verification of the reload core design will be performed during startup testing. The startup tests will be consistent with Technical Specifications and testing recommended in American National Standards Institute/American Nuclear Society (ANSI/ANS)-19.6.1-1985, "Reload Startup Physics Tests for Pressurized Water Reactors."

Please direct any questions or comments regarding this matter to Mr. Douglas S. Huston, Braidwood Nuclear Station Licensing Supervisor at (815)458-2801 extension 2511.



Karl L. Kaup  
Site Vice President  
Braidwood Generating Station

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Attachment: Operating Limits Report, Braidwood Unit 2 Cycle 6

cc: R. Assa, Braidwood Project Manager - NRR  
H. Miller, Regional Administrator - RIII  
C. Phillips, Senior Resident Inspector - Braidwood  
Office of Nuclear Facility Safety - IDNS