

Ms. Irene Johnson, Acting Manager  
Nuclear Regulatory Services  
Commonwealth Edison Company  
Executive Towers West III  
1400 Opus Place, Suite 500  
Downers Grove, IL 60515

October 25, 1996

SUBJECT: SAFETY EVALUATION (SE) REGARDING LEAK-BEFORE-BREAK ANALYSIS -  
BYRON STATION, UNITS 1 AND 2, AND BRAIDWOOD STATION, UNITS 1 AND 2  
(TAC NOS. M95342, M95343, M95344 AND M95345)

Dear Ms. Johnson:

By letter dated April 30, 1996, Commonwealth Edison Company (ComEd, the licensee) submitted a request to apply leak-before-break (LBB) analyses to eliminate large primary loop pipe rupture from the structural design basis for Byron Station, Units 1 and 2, and Braidwood Station, Units 1 and 2. The request was based on the LBB analysis of the primary loop piping as permitted by General Design Criteria 4 (GDC-4) of 10 CFR Part 50, Appendix A. ComEd provided additional information by letter dated September 25, 1996, in response to the staff's request for additional information dated August 26, 1996.

The staff has completed its evaluation of the information presented in the aforementioned documents. The staff has concluded from its independent analysis that the probability of large pipe breaks occurring in the primary loop piping of these units is extremely low. Thus, per GDC-4, the dynamic effects of such breaks need not be considered in their structural design basis. The enclosed SE provides the technical basis for the staff's finding.

Sincerely,

Original signed by:

Ramin R. Assa, Project Manager  
Project Directorate III-2  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454, STN 50-455,  
STN 50-456, STN 50-457

Enclosure: SE

cc w/encl: see next page

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\*concurrence provided by memo dtd 10/15/96; no major changes

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in dark ink, appearing to read "Ramin R. Assa", is written over a horizontal line.

Ramin R. Assa, Project Manager  
Project Directorate III-2  
Division of Reactor Projects - III/IV  
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454, STN 50-455,  
STN 50-456, STN 50-457

Enclosure: SE

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