



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

February 7, 1992

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

Subject: Additional Information Related to the Commonwealth Edison (CECo)
Pressurizer Surge Line Leak-Before-Break (LBB) Analysis

Byron Units 1 and 2,
NRC Docket Numbers 50-454 and 50-455

Braidwood Units 1 and 2,
NRC Docket Numbers 50-456 and 50-457

- Reference:
- (1) D.L. Taylor (CECo) to NRC letter dated January 8, 1991
 - (2) D.J. Chrzanowski (CECo) to NRC letter dated December 19, 1991
 - (3) Teleconference between Commonwealth Edison and NRC Staff, January 21, 1992

Dear Dr. Murley:

The purpose of this letter is to document issues that were discussed in the Reference (3) conference call. This conference call was requested by NRC Staff to answer questions related to the Byron and Braidwood Units 1 and 2 Pressurizer Surge Line Leak-Before-Break (LBB) analysis. The LBB analysis, detailed in Westinghouse report WCAP-12739/12740, was transmitted in Reference (1). This analysis was provided with the NRC Bulletin 88-11 (Pressurizer Surge Line Thermal Stratification) supplemental response for Byron, Braidwood and Zion.

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Issues that prompted the phone call and were subsequently addressed were as follows:

Question #1: (Is the LBB analysis approval required to carry out the corrective actions of Bulletin 88-11?

Response #1: No, approval of the LBB analysis is not required to meet the NRCB 88-11 commitments. However, a significant ALARA savings will be realized if the analysis is approved. Without approval, whip gap measurements during startup of the Unit will be required to ensure that the gaps are within tolerance of the gaps used in the design basis pipe break analysis. LBB approval will allow for removal of the pipe whip shims. No gap measurements will be required.

There is also a potential for unpredicted thermal interference with the whip restraints. An unpredicted thermal interference with a whip restraint would cause a delay in startup of the Unit, while the thermal interference is evaluated. The costs associated with delaying the startup of the Unit are significant.

Question #2 Thermal contact is predicted at one whip restraint on the Braidwood Unit 2 surge line. Is LBB required to bring the surge line to within fatigue limits?

Response #2 No. The thermal contact has been evaluated. The thermal interference at the whip restraint is small (approximately 1/8"). The effects of this interference are negligibly small. Thus, LBB approval is not required to meet fatigue limits.

Question #3 What effect does the thermal contact at the whip restraint have on the usage factor?

Response #3 The calculated usage factor for the case with no interference at the whip restraint is 0.83. The effects of the interference on piping response is considered negligibly small. Thus, the usage factor with thermal interference at the whip restraint is also 0.83.

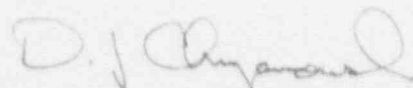
Background

NRC Bulletin 88-11 requested all addressees to establish and implement a program to ensure pressurizer surge line integrity with respect to thermal stratification, striping and design basis loads. The structural evaluation for the Byron and Braidwood surge lines, considering thermal stratification, was provided in Reference (1). This analysis concluded that one (1) vertical support must be removed from the surge lines by the end of 1993 to meet code fatigue requirements.

In Reference (2) CECo requested that the NRC review, and if acceptable, approve the Pressurizer Surge Line LBB analysis prior to the Braidwood Unit 1 outage. This outage is currently scheduled for September of 1992. Our purpose for obtaining the surge line LBB approval was to assure that our planned modifications of the surge line, as necessitated by NRC Bulletin 88-11, proceed without potential interference from the surge line whip restraints.

We appreciate your efforts in expediting the review of the Byron/Braidwood surge line LBB analysis. If there are any questions or comments, please contact me at (708) 515-7292.

Sincerely,



David J. Chrzanowski
Nuclear Licensing Administrator
Generic Issues

cc: A. Bert Davis, Regional Administrator-RIII
R. Pulsifer, Project Manager-NRR/PDIII-2
A. Hsia, Project Manager-NRR/PDIII-2
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