



Commonwealth Edison

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April 13, 1984

Mr. James G. Keppler
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
Pipe Whip Restraint Energy
Absorbing Material (EAM) Load
Angularity Test Report
NRC Docket Nos. 50-454, 50-455,
50-456, and 50-457

- References (a): R. L. Spessard letter to Cordell Reed
dated March 31, 1983.
- (b): D. L. Farrar letter to J. G. Keppler
dated April 29, 1983.
- (c): R. L. Spessard letter to Cordell Reed
dated May 24, 1983.
- (d): B. J. Youngblood letter to D. L. Farrar
dated March 30, 1983.
- (e): E. D. Swartz letter to H. R. Denton
dated May 4, 1983.
- (f): B. J. Youngblood letter to D. L. Farrar
dated July 21, 1983.
- (g): E. D. Swartz letter to H. R. Denton
dated September 8, 1983.

Dear Mr. Keppler:

The Reference (a) Byron Station Inspection Report No. 50-454/83-06; 50-455/83-05 contained an item of non-compliance No. 4(a) dealing with angular offset dynamic testing of crushable Energy Absorbing Material (EAM) utilized in our pipe whip restraints at Byron and Braidwood Stations. Our Reference (b) thirty day response in this matter provided our commitment to perform the requisite EAM testing. Reference (c) acknowledged our response and stated that our differing technical views in this matter would be decided upon test completion. The purpose of this letter is to provide the results of the EAM Test Program, and provide our evaluation of these results as they apply to the pipe whip restraints utilizing EAM at our Byron and Braidwood Stations.

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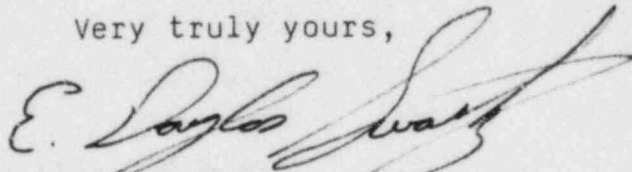
Concurrent with our discussions with your Staff in this matter were the following communications with NRR. Reference (e) provided our response to the Reference (d) NRR request for additional information, Question 110.73 from the Mechanical Engineering Branch. Reference (f) provided Commonwealth Edison with an NRR status report in this matter. Reference (g) provided our response to certain of the statements contained in the status report and provided the EAM Test Program for NRR review.

Reference (b) expressed our belief that based on our previous investigations into the effects of load angularity through detailed finite element analysis and testing of EAM relative to our LaSalle County Station, the effects of similar load angularities in the pipe whip restraints at Byron and Braidwood Stations would not significantly affect the ability of the pipe whip restraints to perform their intended function. Among other conclusions drawn from the results of this additional EAM Test Program, it has confirmed that there appears to be no apparent loss in the energy absorbing capacity of EAM due to load angularity.

Enclosed for your information and review is a copy of our evaluation. In our judgment, the energy absorbing capability of the EAM in the configurations utilized in the Byron and Braidwood Stations pipe whip restraints has been confirmed by the Hexcel/MCI test results.

By copy of this letter to NRR, we are also requesting their review of the enclosed report. We would be happy to discuss any remaining concerns that the Region or NRR may have in this matter at your earliest convenience. Please address any questions that you or your staff may have concerning the EAM Test Program results to this office.

Very truly yours,



E. Douglas Swartz
Nuclear Licensing Administrator

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Attachment

cc: J. A. Stevens - LB1
L. N. Olshan - LB1
I. T. Yin - Region III

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