



Commonwealth Edison
72 West Adams Street, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690 - 0767

November 30, 1989

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

Subject: Dresden Station Units 2 and 3
Supplemental Response to
NRC Bulletin 80-11
NRC Docket Nos. 50-237 and 50-249

- References:
- (a) I.E. Bulletin 80-11, dated May 8, 1980.
 - (b) J. Wojnarowski (CECo) letter to H. Denton (NRC), dated October 6, 1986.
 - (c) J. Zwolinski (NRC) letter to D. Farrar (CECo), dated December 4, 1986.
 - (d) B. Siegel (NRC) letter to T. Kovach (CECo), dated July 20, 1989.
 - (e) M. Richter (CECo) letter to T. Murley (NRC), dated September 26, 1989.

Dear Dr. Murley:

Reference (a) requested licensees to perform a re-evaluation of the design adequacy of safety-related masonry walls under postulated loads. In Reference (b), Commonwealth Edison (Edison) submitted documentation supporting the use of the leak-before-break concept for establishing the acceptability of the masonry walls associated with the Reactor Water Cleanup System (RWCS) for Dresden Station Units 2 and 3. With Reference (c), the NRC staff issued a safety evaluation for Dresden Station Units 2 and 3. However, the safety evaluation indicated that the concept of leak-before-break was under review as a broad-scope rulemaking issue, and that the adequacy of its application to the RWCS piping would be addressed at a later date. Recently, the NRC informed Edison, in Reference (d), that the leak-before-break approach was not acceptable for the RWCS piping at Dresden Station since the piping material was subject to an active degradation mechanism (intergranular stress corrosion cracking). Additionally, the NRC requested Edison to submit proposed actions which would resolve the staff's concerns with the masonry wall design for Dresden Station. In Reference (e), Edison indicated a study was being performed to evaluate the feasibility of demonstrating that the masonry walls can withstand the consequences of a postulated RWCS full area break. This letter presents the status of that study.

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The initial phase of the study utilized simplified analytical techniques to determine the appropriate near-term actions to be pursued to ensure the adequacy of the masonry wall design in the event of a RWCS line break. The initial phase included the performance of sensitivity analyses on the reduction of peak differential pressures in the area of the masonry walls by increasing the vent area and/or decreasing the pipe break blowdown rate. The results of this initial phase indicated that an increase in vent area or a decrease in blowdown rate, or a combination of both, would be necessary to reduce pressure and ensure masonry wall integrity. A decrease in the blowdown rate can be accomplished by more precise modeling of the blowdown phenomenon to account for friction, using the thermal hydraulic computer code RELAP5.

The final phase of the study is in progress and includes blowdown modeling using RELAP5. In parallel, the differential pressures that the individual walls can reasonably be expected to withstand will be determined. It is expected that the final phase activities will be completed by February 16, 1990. At that time, Edison will submit the results of these activities, and any appropriate actions which are required to ensure the integrity of the masonry walls in the vicinity of the RWCS piping.

Please direct any questions that you may have on this response to this office.

Respectfully,

Milton H. Richter

M.H. Richter
Generic Issues Administrator

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cc: A.B. Davis - Regional Administrator, Region III
Resident Inspector - Dresden Station
B. Siegel - Dresden Station Project Manager