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April 7, 1986

BECo 86-041

Mr. John A. Zwolinski, Director
BWR Project Directorate #1
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

License DPR-35
Docket 50-293

Subject: Modification of Vacuum Breakers

Dear Sir:

We are providing further information on our Vacuum Breaker Chugging Methodology as requested in your letter of January 23, 1986(BECo #1.86-021). This information was provided in two (2) generic and one (1) plant specific documents which apparently were never docketed for Pilgrim Station. We are attaching two (2) of these three (3) reports. The third report "CDI Technical Memo 84-11" was transmitted directly to you by General Electric on November 6, 1984. A copy of their cover letter is also attached.

We trust this meets your needs to complete the review of the vacuum breaker issue.

Very truly yours,

WD Harrington

MTL/ns

Attachments

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Attachment 1

Question 1: Is the chugging source rate used in the Pilgrim evaluation the same as the one developed in C.D.I. Report No. 84-3?

Response: Yes. The methodology followed in C.D.I. Report No. 84-3 (Ref. 1) is identical to the methodology used in the Pilgrim evaluation (Ref. 2) and detailed in response to question 5 from the NRC (Ref. 3).

Question 2: Did the Pilgrim calculation apply the 1.07 load factor to account for the uncertainty in calculating the underpressure?

Response: A load factor, used to assure conservative prediction of the underpressure and detailed in response to question 2 from the NRC (Ref. 3), was applied to the Pilgrim evaluation (Ref. 2). In fact the load factor used in the plant unique evaluation was 1.06 and yields a conservative prediction of the underpressure.

Question 3: Did the Pilgrim calculation use the drywell model which resulted in the most conservative prediction?

Response: Yes. Drywell modeling was examined in response to question 6 from the NRC (Ref. 3). For the Pilgrim evaluation (Ref. 2), the acoustic volume model results in a more conservative forcing function, and was therefore used.

References

1. "Mark I Wetwell to Drywell Vacuum Breaker Load Methodology, Revision 0," Continuum Dynamics, Inc. Report No. 84-3, February 1984.

2. "Mark I Wetwell to Drywell Differential Pressure Load and Vacuum Breaker Response for the Pilgrim Station Unit 1, Revision 0," Continuum Dynamics, Inc. Technical Note No. 84-15, January 1985.

3. "Response to NRC Request for Additional Information on Mark I Containment Program Wetwell to Drywell Vacuum Breaker Load Methodology Revision 0," Continuum Dynamics, Inc. Technical Note No. 84-11, October 1984.