



John C. Brons
Senior Vice President
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March 25, 1986
JPN-86-11

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. Daniel R. Muller, Director
BWR Project Directorate No. 2
Division of BWR Licensing

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Mark I Containment Long Term Program
Wetwell to Drywell Vacuum Breaker Response

- References:
1. NRC Generic Letter 83-08, "Modification of Vacuum Breakers on Mark I Containments", dated February 2, 1983.
 2. NRC letter, D. B. Vassallo to H. C. Pfefferlen (GE), dated December 24, 1984, transmitting safety evaluation.
 3. NYPA letter, J. C. Brons to D. B. Vassallo, dated August 20, 1985 (JPN-85-64), transmitting plant unique analysis.
 4. NRC letter, H. I. Abelson to J. C. Brons, dated January 17, 1986, transmitting NRC request for additional information.

Dear Mr. Muller:

In Reference 1 the NRC requested information related to a potential failure mode of the wetwell to drywell vacuum breakers.

To resolve the generic aspects of this issue, a report was prepared by Continuum Dynamics Inc. for the Mark I Owners Group. This report described the model to be used to compute the vacuum breaker valve response in Mark I plants. In Reference 2, the NRC issued a safety evaluation concluding that the valve dynamic model presented in the generic report is acceptable.

In Reference 3 the New York Power Authority submitted a plant unique analysis based on the generic report. This plant evaluation determined that no actuation of wetwell to drywell vacuum breakers would take place during the chugging phase of a postulated loss of coolant accident.

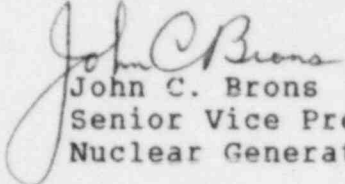
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Attached is the Authority's response to an NRC request for additional information (Reference 4) on this topic.

Should you or your staff have any further questions regarding this matter, please contact Mr. J. A. Gray, Jr. of my staff.

Very truly yours,


John C. Brons
Senior Vice President
Nuclear Generation

cc: Office of the Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 136
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ATTACHMENT 1 TO JPN-86-11

dated

MARK I CONTAINMENT LONG TERM PROGRAM
WETWELL TO DRYWELL VACUUM BREAKER RESPONSE

The following data are supplied in response to an NRC request for additional information.

- NRC Question 1: Is the chugging source rate used in the FitzPatrick evaluation the same as the one developed in Continuum Dynamics, Inc. (CDI) Report 84-3?
- NYPA Response: Yes. The methodology followed in CDI Report 84-3 (Ref. 1) is identical to the methodology used in the FitzPatrick evaluation (Ref. 2). This methodology is explained in detail in response to question 5 of Ref. 3.
- NRC Question 2: Did the FitzPatrick calculation apply the 1.07 load factor to account for the uncertainty in calculating the underpressure?
- NYPA Response: As stated in Reference 2, a load factor of 1.06 was used to account for the uncertainty in calculating the underpressure. For the FitzPatrick plant unique analysis, a load factor of 1.06 is conservative, since it bounds the underpressure.
- NRC Question 3: Did the FitzPatrick calculation use the drywell model which resulted in the most conservative prediction?
- NYPA Response: Yes. Drywell modeling was examined in response to question 6 of Reference 3. For the FitzPatrick evaluation (Ref. 2), the capacitance model was used, because it results in a more conservative forcing function.

References:

1. "Mark I Wetwell to Drywell Vacuum Breaker Load Methodology, Revision 0," Continuum Dynamics, Inc. Report 84-3, February 1984.
2. "Mark I Wetwell to Drywell Differential Pressure Load and Vacuum Breaker Response for the James A. FitzPatrick Nuclear Power Plant, Revision 0," Continuum Dynamics, Inc. Technical Note 84-25, 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 84-11, October 1984.