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CT-1079
PDR 2/11/79

To: Dr. R. Savio

From: Ivan Catton

Subject: Zimmer Nuclear Power Plant

Copies To: S. Duraiswamy and A. Bates

At the San Francisco meeting of Professor Plesset's subcommittee (Fluid Dynamic Effects) LOCA - Related hydrodynamic loads were discussed. In particular, it was stated that vent lateral loads due to steam condensation were random in magnitude and direction, see page 377 of the meeting transcript. It is assumed that the loads are applied to all the vents simultaneously.

The assumption of simultaneous application is clearly conservative under some circumstances. From the meeting, see page 381, lines 11-13, I was left with the feeling that a statistical analysis of the multiple vent data had not been carried out. It seems to me that before a Monte Carlo method (page 379) can be used with confidence, one must demonstrate the random nature of the phenomena (direction and magnitude). It is my opinion that this has not been done. It is difficult to assess whether the assumption of simultaneous application of the loads on all vents has enough conservatism to accommodate the lack of conservatism associated with the possibility that the forces due to chugs may not be random in direction and magnitude.

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