



NUCLEAR ENERGY INSTITUTE

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April 8, 2003

John N. Hannon
Chief, Plant Systems Branch
Office of Nuclear Reactor Regulation
Mail Stop 11 A11
U. S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: White Paper Outlining Process for Determining Breach Size in Support of
Local Debris Generation Following a Design Basis LOCA

Dear Mr. Hannon:

At a March 5, 2003 meeting to discuss GSI-191, *Assessment of Debris Accumulation on PWR Sump Performance*, Industry representatives presented a process for determining the effective break area for use in assessing debris generation following a Loss of Coolant Accident (LOCA). The process incorporates accepted fracture mechanics techniques for high-quality large bore piping to identify a conservative breach size for use in evaluating local debris generation.

The enclosed white paper outlines the process and basis for the fracture mechanics approach. As agreed during the March 5 meeting, we are providing this white paper to enable NRC review in advance of a meeting to discuss the approach. This meeting is anticipated to occur in late April, 2003.

Please contact John Butler of the NEI staff or myself if you need further information.

Sincerely,

Anthony R. Pietrangelo

Enclosure

c: Mr. Ralph E. Architzel, U. S. Nuclear Regulatory Commission
Mr. John Lehning III, U. S. Nuclear Regulatory Commission
Mr. John G. Lamb, U. S. Nuclear Regulatory Commission