



NUCLEAR ENERGY INSTITUTE

David J. Modeen
DIRECTOR, ENGINEERING
NUCLEAR GENERATION DIVISION

March 26, 1999

Dr. Brian W. Sheron
Associate Director for Project Licensing and Technical Analysis
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Industry Assessment of Thermal Fatigue Cracking in Non-isolatable
Small Diameter Safety Injection Piping

PROJECT NUMBER: 689

Earlier this month, the EPRI Materials Reliability Project (MRP) Executive Committee authorized formation of an Issue Task Group (ITG) to develop recommended industry actions to address thermal fatigue cracking in non-isolatable small diameter safety injection piping in pressurized water reactor plants. I want to take this opportunity to update you on the planned industry tasks.

This effort results from your request last fall that industry perform a technical evaluation of service experience reported in a proposed generic letter on thermal fatigue cracking in small diameter high pressure safety injection piping (63 *Federal Register* 15233). A preliminary industry assessment of the available information, which we discussed with your staff in February, did not identify a straightforward recommendation as to if, and how, licensees should monitor for this admittedly low-likelihood cracking mechanism. Given the potential consequences of pipe failure, we agreed that further industry study is warranted.

Mr. Michael Robinson of Duke Energy Systems will chair the ITG. The work scope is expected to include the following tasks:

- Assess and possibly enhance the existing models to identify pipe locations that might warrant monitoring or non-destructive examination. This might require laboratory or in-plant validation tests.
- Develop industry good practices on appropriate maintenance and operating procedures to reduce the likelihood of thermal fatigue cracking.
- Develop guidance on the appropriate monitoring or non-destructive examination techniques.

9904020240 990326
PDR REVGP ERGNUMRC
C PDR

1776 1ST STREET, NW SUITE 400

WASHINGTON, DC 20005-1708

PHONE 202 739 8000

FAX 202 785 4519

PROJ 689

Dr. Brian W. Sheron

March 26, 1999

Page 2

- Establish the appropriate level of interaction with the NRC staff to reach agreement on needs and expectations necessary to achieve issue resolution.

Based on the current schedule of MRP activities on this topic and those related to reactor vessel integrity, I anticipate a senior management meeting in the June-July timeframe to discuss these efforts.

If you or your staff have questions, please contact me at (202) 739-8084 or Kurt Cozens at (202) 739-8085.

Sincerely,



David J. Modeen

KOC/

- c: Dr. Jack R. Strosnider, U.S. Nuclear Regulatory Commission
Mr. Richard H. Wessman, U.S. Nuclear Regulatory Commission
Mr. William H. Bateman, U.S. Nuclear Regulatory Commission
Mr. Keith R. Wichman, U.S. Nuclear Regulatory Commission
Mr. Stewart L. Magruder, Jr., U. S. Nuclear Regulatory Commission
Mr. Michael R. Robinson, Duke Energy Systems

Dr. Brian W. Sheron

March 26, 1999

Page 3

x:/_eng/djm/matls/EPRIMRP/Letter to Brian Sheron on HPS Pipe Cracking.doc

bc: Mr. Ernest Throckmorton, Virginia Power
Dr. Avtar Singh, EPRI
Mr. Michael Short, Southern California Edison