

May 18, 2006

Dr. Graham B. Wallis, Chairman
Advisory Committee on Reactor Safeguards
Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: RESPONSE TO THE ADVISORY COMMITTEE ON REACTOR SAFEGUARDS LETTER, DATED APRIL 14, 2006, CONCERNING THE REVIEW OF THE 1994 ADDENDA TO THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS CODE FOR CLASS 1, 2, AND 3 PIPING SYSTEMS AND THE RESOLUTION OF THE DIFFERENCES BETWEEN THE NUCLEAR REGULATORY COMMISSION STAFF AND THE ASME

Dear Dr. Wallis:

Thank you for your letter of April 14, 2006, concerning the resolution of differences between the Nuclear Regulatory Commission (NRC) staff and the American Society of Mechanical Engineers (ASME) involving the 1994 Addenda to Section III of the ASME Boiler and Pressure Vessel Code for Class 1, 2, and 3 piping systems.

As discussed in the staff's April 7, 2006, presentation to the ACRS, the NRC, in Title 10 Code of Federal Regulations (CFR) 50.55a, has not permitted the use of the ASME Code criteria for the seismic design of ASME Class 1, 2, and 3 piping systems since significant relaxations of the criteria were introduced in the 1994 Addenda. After several years of extensive discussions that took place as part of the staff's participation in special working groups established by the ASME, most of the differences between the staff and the ASME have been resolved through modifications to the 1994 criteria.

The one remaining issue involves the potential for a reduction in material strength due to dynamic strain aging of certain carbon steels at temperatures above 300EF. The staff proposes to address this issue by placing a restriction on the use of the ASME code piping criteria in a future 10 CFR 50.55a rule update. The staff notes that, even with the proposed restriction, the new piping rules would still be a relaxation of the ASME Code criteria as currently accepted in 10 CFR 50.55a.

In the subject letter, the Committee encouraged the staff to continue to work with the ASME to resolve this remaining issue. The staff will continue to work with ASME and public stakeholders in an attempt to resolve technical differences. The NRC staff has exhaustively reviewed the currently available test data and analyses regarding the issue of dynamic strain aging and

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believes a restriction in 10 CFR 50.55a is necessary to address this issue. If this issue is resolved in the future, and appropriate changes are made to the ASME Code, we could endorse that version without this proposed restriction. The ASME will have an opportunity to comment on the draft rule update.

We appreciate the Committee's attention to this topic.

Sincerely,

/RA William F. Kane Acting for/

Luis A. Reyes
Executive Director
for Operations

cc: Chairman Diaz
Commissioner McGaffigan
Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons
SECY

