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UNITED STATES
NUCLEAR REGULATORY COMMISSION
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CHAIRMAN

Professor Ajaya Kumar Gupta
Chairman, 16th International Conference on
Structural Mechanics in Reactor Technology
(SMiRT 16)
North Carolina State University
Raleigh, North Carolina 27695-7908

Dear Professor Gupta:

I would like to thank you for giving me an opportunity to review the description of the proposed technical divisions for SMiRT 16. I am pleased to note the introduction of several new divisions to cover important areas of aging, license renewal, decommissioning, and non-reactor facilities. These additions will certainly make SMiRT 16 more relevant to current issues and will provide a good forum in which to discuss structural mechanics aspects of these issues.

Based on our knowledge of issues and ongoing work in NRC and industry, I am providing the enclosed comments for your consideration. These comments highlight some specific topics of interest and offer a few suggestions for clarification of the division descriptions.

As a member of the SMiRT 16 Senior Advisory Board, I especially look forward to a stimulating and interesting conference.

Sincerely,

Richard A. Meserve

Enclosure: As stated

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Comments on SMiRT 16 Technical Program Divisions

The following comments are based on some of the topics of interest to the NRC, ongoing work in NRC and industry, and review of the programs of previous SMiRT conferences.

1. There appears to be an overlap on aging management between Divisions D and O. It might be advantageous to focus aging management issues in Division D and to keep the focus of Division O on operational, inspection, and maintenance issues.

2. Aging of concrete should be highlighted in Division D, with possible consideration in Division H.

3. I suggest adding Pressurized Thermal Shock (PTS) and related activities (e.g., re-evaluation, master curve, and new embrittlement correlations) as a specific topic in Division G.

4. Division N, "Mechanical and Thermal Problems of Fusion Reactors," has been eliminated in recent SMiRT conferences. While this is not a significant technical issue from the NRC's standpoint, there is still a substantial amount of work in progress world-wide on fusion technology. The specific technical challenges are sufficiently different from fission-based technology to perhaps include it as one of the topics in Division S.

5. While the title of Division W includes "waste," the topical areas detailed for that division do not specifically include waste repositories. We suggest adding some coverage of structural issues in high- and low-level waste repositories, as well as independent spent fuel storage facilities (dry cask) and transportation issues. One other area that is also not strictly "reactor" technology, but has been growing rapidly, is accelerator technology. It may warrant inclusion as a topic in Division W.

6. It is not clear where steam generator issues are covered. There are sufficient issues to warrant attention - flow-induced vibration, corrosion, fracture mechanics. I suggest that these topics be included in appropriate divisions.

7. The following topics may warrant specific mention in the program:

   Behavior of mixed oxide (MOX) fuel (Division C)

   New fuel cladding materials (Division C)

   Structural integrity assessment of spent nuclear fuel cladding (Division D)

   Fluid-structure interaction topics: erosion/corrosion, environmentally assisted degradation (Division F or G)

   Probabilistic fracture mechanics (Division G)

   New technologies/materials for maintenance/repair, e.g., electrosleeving (Division O)

Enclosure