ANS Standards Committee



Chairman: N. Prasad Kadambi (U.S. NRC) Vice Chairman: Donald Spellman (ORNL) Secretary: Pat Schroeder (ANS) Consensus Committee Chairmen: Carl Mazzola (Shaw) Nuclear Facilities Calvin Hopper (ORNL) Criticality Safety Tawfik Raby (NIST) Research Reactors Allen Camp (Sandia) Risk Informed

Plus 12 At-Large (Appointed) Members:

Nuclear Facilities Standards Committee

ANS Standards Seminar

Scope: Siting, design, operation of nuclear facilities (other than those addressed by N17), including radwaste management and site remediation and restoration.

- **29** approved standards;
- 22 standards under revision
- 16 new standards projects

Nuclear Facilities Standards Committee Has 7 Subcommittees

- Maintenance, Operations, Testing, and Training
- Systems Design Criteria
- Modeling and Analysis
- Siting, Environmental, and Emergency Preparedness
- Fuel Cycle, Waste Management & Decommissioning
- HTGR Design Criteria
- Advanced initiatives (Gen III-A/IV, GNEP)

Scope: Prevention of accidental criticality, identification of potential criticality situations, and response plans for criticality accidents (all outside reactors)

ANS-8 Scope: Prevention of criticality during handling, storage, transporting, and processing fissionable nuclides

15 approved standards

N17, Research Reactors, Reactor Physics, Radiation Shielding, and Computational Methods

ANS Standards Seminar

Scope:

- Siting, design, and operation of (1) all training and research reactors and (2) critical facilities
- Computer codes used for all types of nuclear reactors
- Reactor physics, including shielding
- Nuclear cross sections

31 approved standards; 7 new standards under development

N17, Research Reactors, Reactor Physics, Radiation Shielding, and Computational Methods

ANS Standards Seminar

Subcommittees

- Critical Experiments
- Radiation Protection & Shielding
- Mathematics & Computation
- Fast Pulse Reactors
- Operation of Research Reactors
- Physics of Reactor Design

Risk-Informed Standards Committee

ANS Standards Seminar

Scope: Criteria and methods for risk assessment and risk management as applied to the design and operation of nuclear facilities, including radwaste management and site remediation and restoration

2 new standards:

External Events PRA Methodology (published jointly with ASME)

Fire PRA

- **3 Working Groups**
 - Low Power and Shutdown PRA
 - Level 2 Accident Progression & Offsite Release
 - Level 3 Offsite Consequence Analysis

- NRC participation is sought routinely on many standards committees and WGs
- •NRC has endorsed ANS standards in Regulatory Guides and in one regulation*
- Although NRC has only one vote in about 20 cast they have significant impact on the development of standards
- •NRC participation could have a major influence on evolving regulatory guidance
- The relationship has been fruitful for both parties

* This practice needs reinforced in the future

- Direct liaison with NEI over the last two years has proven very beneficial to ANS and NEI
 - More open communication on industry needs
 - Avoidance of duplication of efforts
 - Enhanced NEI support for consensus standards
- NEI liaison to ANS Standards Committee Jack Roe

- Just published a PRA methodology standard jointly with ASME after several years of effort. Includes:
 - ASME standard on internal hazards
 - ANS standard on external events
 - ANS standard on fire
- Joint committee with ANS, ASME, IEEE Nuclear Risk Management Coordinating Committee
- Need to expand this type of coordination with other SDOs to enhance communications and avoid duplication.

Issue

- Submittals are being made to the NRC that reference ANS standards.
 - Technical review by NRC for SER does not often recognize the standard and its technical content so the words from the standard remain in the submittal but the reference to the standard gets removed.
 - This is unfair to the working group volunteers who have spent considerable time in the consensus development of that standard
 - This group can enhance that communication between SDOs and the NRC so the NRC is more aware of new, revised and reaffirmed documents upon approval.

ANS Actions in the Works

ANS Standards Seminar

 Direction to Consensus Committees to ensure that NRC involved in the development of new standards as much as possible.

• CC Chair ensures that NRC is given a chance to do a technical review of the completed standard for comments and possible endorsement.

Build this into the ANS standards process