

**American Nuclear Society
Risk-Informed Standards Consensus (RISC) Committee Meeting Minutes
November 17, 2003, 1:00 p.m. to 4:00 p.m. * New Orleans, LA**

Members Present

Bob Bari, *Brookhaven (RISC Chairman)*
Mark Rubin, *NRC*
Stanley Levinson, *Framatome ANP, Inc.*
Andy Dykes, *ABS (formerly EQE, formerly PLG)*
Allen Camp, *Sandia National Lab.*
Rick Hill, *GENE (to replace Jim Klapproth)*
Jeff Mittman, *Consultant (formerly EPRI)*
Cara Ford, *ANS Standards Administrator*
Mary Beth Gardner, *ANS Headquarters*
Ken Kiper, *Seabrook Nuclear Station*
Doug True, *ERIN Engineering (for Gene Hughes)*
Jim Mallay, *Chair, ANS Standard Steering Committee*
Doug Brandes, *Duke Energy Company*
Mary Drouin, *NRC (to replace Mark Cunningham)*
Biff Bradley, *NEI*
Bob Budnitz, *LNLL*
Paul Amico, *SAIC*
David Finnicum, *Westinghouse*

Guests

Bill Burchill (*Texas A&M, LP/SD Writing Group*)
Dennis Bley (*LP/SD Writing Group*)

During the meeting the RISC committee members were introduced to Cara Ford, who is taking Suriya Ahmad's position as the ANS Standards Administrator (for the RISC committee). Also during the meeting, the External Events PRA Methodology Standard, ANSI/ANS-58.21-2003, arrived, enabling everyone to take their copy home.

After a brief introduction, the agenda was reviewed. The minutes from the San Diego meeting (June 2003) were approved with some minor corrections. There was some discussion about the meeting attendance. It was pointed out by one person that traveling for a three-hour meeting was often unreasonable and untenable. It was suggested that if a meeting was necessary, that it be at least a day. Further, the Annual and Winter ANS meetings were not typical venues for the PRA practitioners that comprised the RISC committee. Meeting in concert with the ANS PSA conference (to be held in 2005) and the PSAM conference (to be held in New Orleans in 2006) would be appropriate venues for a meeting. Bari stated that he and Mallay were looking into replacing some of the current, but inactive members.

Levinson provided the ASME liaison report. He summarized some of the highpoints from the Committee on Nuclear Risk Management (CNRM) meeting that was held in Seattle, WA on September 24, 2003:

- The proposal for the Generic Database project, with Rick Hill as chair, was approved by the Board on Nuclear Codes and Standards.
- A project team was formed to address the issues identified during the trial applications of the ASME PRA Standard at SONGS. The Addendum B Project Team consists of Barry Sloane (chair), Doug True, Biff Bradley, Michelle Carr, David Miskiewicz, Gareth Parry, and Ian Wall.
- The issuance of DG-1122 was discussed. The remaining differences between the industry and the NRC were discussed: qualitative versus quantitative definition of “significant,” and suggested versus mandatory list of peer review topics.
- Need for statements for a full Level 2 PRA standard and a Level 3 PRA standard was discussed. No motion was made to proceed with the Level 2 standard – it remains the purview of the Planning Subcommittee. The Level 3 PRA standard was passed and a writing group is being assembled. [RISC committee to discuss Level 2 PRA standard during the “scope” discussion.]
- The next meeting is in San Antonio, Texas on April 19-21, 2004. All members of the RISC committee were invited to attend.
- CNRM requested an understanding of the scope of the Fires PRA Standard. (See below.)
- CNRM requested that there be increased communication between ASME and ANS.
- CNRM requested a discussion of how the ASME standards and the ANS standards will fit together. Drouin mentioned that ASME and NRC were putting a letter together recommending a meeting of all standard development organizations (SDOs) that are preparing PRA-related standards (e.g., ANS, ASME, IEEE) for January 2004. Budnitz was concerned that ANS was not being included in the “loop” of the planning process. The meeting will likely be hosted by the NRC (though not be an NRC public meeting).

Budnitz, as chair of the External Hazards writing group, provided the status of the External Events Standard. It was completed and published. (Copies arrived during the meeting.) However, in looking to the future, there are several places where changes need to be made. He asked the RISC committee how ANS would “staff” the individuals needed to continue with efforts related to the Standard. There were several examples of activities:

- need to continue monitor ASME PRA Standard activities and make changes accordingly
- need to interact with the ANS low power/shutdown standard activities
- need to interact with the ANS fire PRA standard activities
- need to be able to respond to questions from the NRC during the endorsement process (NRC’s formal comments are expected in the summer of 2004)
- need to respond to public inquiries

Budnitz stated that in his new position he would not be able to continue as the chair of the writing group. He effectively resigned from that position, though indicated he would willing to be a member of the new group. He also recommended a letter of thanks be sent to the other working group members.

Kiper, as the chair of the low power/shutdown (LP/SD) writing group, gave the status of the LP/SD PRA standard. He reviewed the membership, noting that all had been active and that he had assumed the chair from Budnitz. The group had gone through three drafts in 2003 culminating with draft 4a (to be distributed to the RISC members). The document is essentially

complete except for: LERF at shutdown, qualitative risk assessment (QRA) methodology, and minor editorial changes. He reviewed previously LP/SD work that has been performed in the industry as indication that it is appropriate to pursue this standard at this time (a question raised earlier).

Scope was discussed next, noting in particular that internal fires were not included, and that risk related to spent fuel pools (SFPs) would not be included in the standard. In general, in an attempt to define “in transit,” fuel in the vessel was considered in scope; after leaving the vessel, it was out of scope. Rubin pointed out that SFP risk was a “hot” topic, and may require a standard of its own. True was concerned about the ability to analytically deal with fire at LP/SD states.

Kiper clearly explained that the LP/SD Standard is not a “stand-alone” document, but relies on the supporting requirements and other information in the ASME PRA Standard and the recently released External Events Standard (ANS 58.21-2003). Two sections have unique technical requirements: Section 4.4 (Plant Operating States, POSs), and Section 4.7 (Qualitative Risk Assessment, QRA, and Qualitative Screening Methodology, QSM). He provided examples of how the linkage to the ASME Standard was accomplished in the supporting requirements. He discussed POS, QRA, and QSM technical requirements. A fair amount of time was spent on the POS definition and the characteristics used to define it. For instance, SSC unavailability was not tied to the POS definition, however if during a POS, train A is out of service and then the redundant train is out of service, time-averaging of train unavailability’s (of 0.5) would not be the correct model (since these would be mutually exclusive events). These sections need to be carefully reviewed by the RISC committee.

Also generating a fair amount of discussion was the proposed schedule. Kiper proposed the RISC committee complete its review by the end of December 2003, to be followed by revision and issuance for trial use by January 2004. The trial use was envisioned by Drouin to be accomplished in concert with the DG-1122 pilots. First, the RISC committee did not feel the review could be completed by the end of December – a date of February 17, 2004 was agreed upon. Further, several industry representatives were quite skeptical about any participation in the trial use of the LP/SD Standard during their DG-1122 pilots. With the extended review time, followed by balloting and public review occurring in April, the Standard could not be released until later in 2003 (and therefore not in sync with the DG-1122 pilots).

The presentation on the fire PRA standard was made by Brandes, standing in for Dennis Henneke, chair of the fire PRA working group. The current scope of the fire PRA standard is for at-power. This differed with the NRC’s understanding of the scope, but appeared to be the scope specified in the PIN. The schedule has slipped since there is an effort to remain in sync with the NRC/EPRI fire re-quantification effort, which is lagging in schedule. The writing assignments have been made, and the “boilerplate” words have been written. Brandes identified three concerns/issues:

- Fire modeling – coordinated with the EPRI/NRC research
- Control room fires
- LP/SD operation

It was also pointed out that seismic-induced fires needed to be considered.

Finally, the ASME concern about the level of detail of the Fire PRA standard was raised. Brandes assured the RISC committee members that the fire standard would be written to the same level of detail as the other three PRA standards (ASME PRA Standard, External Events, and LP/SD).

Scope issues: White paper or fire at LPSD by Kiper/Henneke in the spring

Scope:

- Advanced LWRs
- Passive reactors
- PBMR
- Casks

Level 2 PRA (?)

- Drouin: NRC effort on alternative methods (outside the standard)
- NUREG (?) Regulatory guide (?)

Next RISC meeting:

- MIT—April 30, 2004?
- ICONS—April 24-28, 2004—DC?
- April 19-21, 22, 23, San Antonio?