DRAFT RISC Telecon Minutes
March 19, 2008 • 1:00 p.m. – 3:00 p.m. (EST)

Participating Members: Robert Budnitz (RISC Vice Chair), *Lawrence Berkeley National Laboratory*; Paul Amico, *SAIC*; Robert Bari, *Brookhaven National Laboratory*; Richard Black, *US DOE*; Biff Bradley, *NEI*; John Gaertner, *EPRI*; Dennis Henneke, *GE*; Rick Hill, *ERIN*; Gene Hughes, *ETRANCO*; Kenneth Kiper, *FPL*; Patricia Schroeder, *ANS*; Daniel (Bill) Stillwell, *South Texas Project Nuclear Operating Company*

Participating Observers, Guests: Doug Hance, *EPRI*; Larry Lee, *ERIN;* Jeff Mitman, *US NRC*; Maria Pohida, *US NRC*; Chris Rochon, *Westinghouse*

1. Roll Call / Schroeder
The Chair, Allen Camp, was forced to miss the conference call, so the Vice Chair Robert Budnitz presided in his place**.** Roll call was taken and the teleconference was begun at 1:06 p.m. EST.

2. Approval of March 5, 2008, Teleconference Minutes / Budnitz
The minutes of the March 5, 2008, teleconference call were approved unanimously as presented.

3. Issues/positions from March 14, 2008, NRMCC Meeting / Budnitz
Bob Budnitz provided an update from the Nuclear Risk Management Coordinating Committee (NRMCC) Meeting held Friday, March 14, 2008. He reported that there was an extensive discussion about the Combined Standard. Budnitz noted that RISC Chair Allen Camp provided a progress report on RISC activities to the NRMMC. Budnitz stated that the NRMCC recognized that a revision to the Fire PRA Standard was needed due to current FPRA pilots. The NRMCC discussed the possibility of merging the ANS RISC Committee and ASME Committee on Nuclear Risk Management (CNRM) Committee. A motion was made at the NRMCC meeting and passed unanimously for both societies to work on finding a mechanism to accomplish combining ANS RISC and ASME CNRM. Budnitz noted that a legal mechanism was already in place that had been used before in other situations that could be adapted.

4. Revision to FPRA Standard / Henneke

See Attachment A, Fire PRA Presentation for the Telecon.

Dennis Henneke summarized the presentation he had earlier provided to the AMSE CNRM Committee. Henneke noted that a FPRA peer review was performed at Diablo Canyon and that the NRC reviewed the Shearon Harris FPRA. Neither FPRA were completed and therefore some parts of the standard were not fully tested. The pilot application of NEI 07-12 process was accomplished. The standard was found useful in determining the quality and

completeness of the Fire PRAs, however, team size and makeup for the peer review may need to be revised to ensure enough members to have a meaningful consensus. The issue is that with a small team there is often only one member with expertise in a given topic area. Henneke reported that he provided the information learned to the CNRM and asked to form a formal ASME-CNRM writing group for the revision. The writing group would be similar to the ANS working group. Gareth Parry and Jeff Lachance were appointed to represent CNRM.

Henneke questioned how the Fire PRA Working Group would run under ASME. It was noted that the Fire PRA Working Group would become an ASME working group. ANS would have the opportunity to comment on all drafts similarly to the process used for the initial release of the Combined Standard. Budnitz reiterated that the same would occur for the External Events Standard and the Low Power/Shutdown (LP/SD) Standard once completed. Essentially the ANS working groups for External Events, LP/SD, and Fire would be disbanded. Henneke noted that he confirmed with the CNRM that the revision of the Combined Standard would be through an addendum.

Henneke stated that a major issue from the Diablo Canyon Pilot Review was the inability of the team to assess capability category for some SRs which referenced internal events SRs. CNRM recommended providing comments on NEI 07-12 to address this issue. No opposition was voiced to CNRM's recommendation. Henneke noted that they would begin work on revising the standard. He expected that additional changes would be necessary to the Fire PRA Standard once full FPRA peer reviews were completed. Henneke anticipated that existing comments would be incorporated by June 2008.

Gene Hughes questioned the impact of NEI and EPRI activities and NRC research on the methodology of NUREG-6850. Henneke stated that NUREG-6850 changes would not be completed in time to be included in the next revision to the Fire PRA Standard.

5. Inclusion of Qualitative Approaches in Integrated Standard / Amico

Discussion

Bob Budnitz noted that there had been substantial e-discussion on the proposed motion throughout the committee. It was recognized that Ken Kiper voiced an opposition to the motion. Amico clarified that the motion was not just about the LP/SD Standard but that it was a concept about the philosophy on the qualitative approach. It was Amico's opinion that it would be wrong not to include the qualitative portion in the standard. Budnitz noted that if the motion was approved, it would be provided to CNRM as a recommendation.

Ken Kiper explained that he did not have a fundamental disagreement about the need for a qualitative approach but rather where it was placed and how it was implemented. Kiper felt that the proposed qualitative risk standard did not fit with the rest of the Combined Standard elements and that the proposed qualitative risk standard was a specific application, not a general risk tool.

The committee debated the issues raised by Kiper as well as how the qualitative application applied to regulatory requirements. Budnitz recapped the discussion stating that the question was whether the committee felt that these qualitative methods were valuable and if

they should be incorporated within the quantitative standard and furthermore incorporated in the revised Combined Standard which would become an integrated standard.

The committee briefly discussed pulling the qualitative portions out of the Combined Standard into a separate standard. The majority of committee members felt that separating the two pieces would make the Combined Standard less user friendly and be clumsy.

Bob Bari questioned whether qualitative methods for a full power situation with a risk informed approach could be substituted for a PRA. The committee was in agreement that a qualitative approach could be substituted for a PRA in specific situations. Budnitz noted that the External Events Standard documented this situation where appropriate. Amico reiterated that this was why he recommended that future procedures found to be of use should also be included in the Combined Standard.

Although the vote on the motion would be open for two weeks until April 2, 2008, members felt that it was beneficial and convenient to vote during the telecon. Budnitz offered members the opportunity to pass on voting and provided the offer to change their votes recorded during the telecon prior to the April 2 due date.

Motion

MOTION: The ANS RISC Committee supports the concept that it is the role of the risk-informed standards development process to provide guidance on the capability, quality, and use of any valid methods that can be used to support plant-specific risk-informed decision making and, further, that such approaches be fully integrated into the overall risk-informed application process. Therefore, the RISC Committee:

1) Re-affirms its previous decisions to include the seismic margins approach and the qualitative LPSD approach in the ANS external events and LPSD PRA standards (respectively) as alternative risk-informed approaches, and by extension to include them in the ASME/ANS integrated Level 1 standard;

2) Supports the update of section 1 of the integrated standard to include the role (including both applicable uses and limitations on use) that such approaches can play in the risk-informed application process and provide guidance on the use and selection of such approaches commensurate in detail with the same guidance provided for "full Level 1" PRA.

3) Recommends that the title of the joint ASME/ANS standard be changed to "Standard for Level 1 Risk-informed Analyses of LWR Nuclear Power Plants" or some such similar title that removes all ambiguity as to the scope.

4) Encourages the future inclusion in the standard of other such structured, risk-informed analytical approaches as they become developed, tested, and proven.

The following vote was recorded:

Approved	Abstained
Paul Amico	Ken Kiper
Bob Bari	
Dick Black	
Biff Bradley	
Bob Budnitz	
John Gaertner	
Dennis Henneke	
Rick Hill	
Gene Hughes	
Bill Stillwell	

It was noted that seven voting members were not able to participate on the call and would be provided an opportunity to vote electronically. The vote would be kept open until April 2. Voting members who did not vote during this call could vote by an email to Pat Schroeder. Also, voting members whose votes were recorded above could change their vote until that date.

6. Other Business / Budnitz
Bob Budnitz noted that the issue of merging the ANS RISC Committee with the ASME CNRM Committee would be discussed further at the next RISC physical meeting June 11, 2008, in Anaheim, California, during the ANS Annual Meeting. Budnitz expected that a small ad hoc committee would be appointed by Allen Camp to investigate the logistics of merging the two consensus committees and asked committee members if they would be interested in participating on the ad hoc committee.

7. Adjourn
The teleconference was adjourned at 2:25 p.m. EST.

Attachment A

Feedback from FPRA Pilot Peer Reviews

Dennis Henneke
ANS Fire PRA Writing Group

Background

A FPRA Peer Review was performed at Diablo Canyon, January 27- February 1

- Led by D. Finnicum, with 5 additional team members, 2 industry observers, 1 process observer (S. Levinson), and 4 NRC observers.

NRC review of the Shearon Harris FPRA was performed February 4-8.

Neither Diablo nor Harris FPRAs was complete.

- Some parts of the Standard were not fully tested.
- Pilot application of NEI 07-12 process was accomplished.

NRC will be issuing comments from the Harris review in the next few weeks.

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Initial Feedback

The reviews did demonstrate that the FPRA standard, as written, provided sufficient guidance to determine the overall technical adequacy of the Fire PRAs.

- 38 SRs out of 173 SRs received questions or comments from the Diablo Review.
- Team size and makeup for the peer review may need to be revised to ensure consensus. Need to ensure multiple experts review each SR.
  - NEI 07-12 (draft) will need to be revised.

FPRA Writing/Review Group held a conference call to discuss the possible changes to the Fire PRA standard section.

- Need CNRM guidance and support to continue.

The following pages were presented to ASME, and the outcome of the ASME meeting are listed in ORANGE.

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Issue 1: Need a Formal Writing/Working Group

For writing of the ASME standard is to be supported by the ANS group, we need an ASME group formed, with marching orders to proceed. The proposed writing/working group is:

- Dennis Henneke (GEH) - Chair
- Bijan Najafi (SAIC)
- Steve Nowlen (Sandia)
- Francisco Joglar (SAIC)
- Mardy Kazarians (Kazarians and Associates)
- Nathan Siu (NRC) or other NRC representative (TBD)
- Kiang Zee (ERIN Engineering)
- *Stuart Lewis (Polestar) – New FPRA HRA, replacement for Alan Kolaczkowski*
- *James Masterlark (NMC) – New FPRA*
- *ASME CNRM member – New*

ASME approved the working group, and has added Gareth Parry and Jeff Lachance as members. Should this be a joint

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Issue 2: Need Direction for Incorporating Changes

A) Need CNRM OK to get started on the changes.

B) Will the changes be incorporated as an Addendum?

C) Should we incorporate known issues/comments, prior to sending the revision for comment?

D) Given additional peer reviews starting in March, should we delay revision/addendum until more peer reviews are complete? If so, can we use the draft for the peer reviews?

E) If we delay the revision/addendum (D), can the "Inquiry" process be employed to communicate potential changes in the interim?

ASME Feedback: Addendum 1 of the combined standard should include any changes to the Fire Standard. Inquiries can be used for interpretation, but not for changing the requirements. We may be able to provide a draft for peer review, but it is the plant's call on whether to use it.

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Issue 3: Reference to SRs in Other Sections

The major issue from the Diablo pilot review was the inability of the team to assess capability category for some SRs which reference internal events SRs (Part 2), for example:

- SR HRA-B1 for all three capability categories (CCs) reads:
  - INCLUDE *and* MODIFY, if necessary, human failure events (HFEs) corresponding to the actions identified per SRs HRA-A1 in the Fire PRA plant response model consistent with Section 3-1.7.2 and Section 3-1.7.5, and in accordance with HLR-HR-F and its SRs in Part 2
  - *and*
  - DEVELOP a defined basis to support the claim of nonapplicability of any of the requirements under HLR-HR-F in Part 2.

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Table 2-1.4.5-2(f) Supporting Requirements for HLR-HR-F

Human failure events shall be defined that represent the impact of not properly performing the required responses, consistent with the structure and level of detail of the accident sequences (HLR-HR-F).

Index No. HR-F	Capability Category I	Capability Category II	Capability Category III
HR-F1	DEFINE human failure events (HFEs) that represent the impact of the human failures at the function, system, train, or component level as appropriate. **Failures to correctly perform several responses may be grouped into one HFE if the impact of the failures is similar or can be conservatively bounded.**		DEFINE human failure events (HFEs) that represent the impact of the human failures at the function, system, train, or component level as appropriate.
HR-F2	COMPLETE THE DEFINITION of the HFEs by specifying *(a)* accident sequence specific timing of cues, and time window for successful completion *(b)* accident sequence specific procedural guidance (e.g., AOPs, and EOPs) *(c)* the availability of cues and other indications for detection and evaluation errors **(d) the complexity of the response. (Task analysis is not required.)**	COMPLETE THE DEFINITION of the HFEs by specifying *(a)* accident sequence specific timing of cues, and time window for successful completion *(b)* accident sequence specific procedural guidance (e.g., AOPs, and EOPs) *(c)* the availability of cues and other indications for detection and evaluation errors **(d) the specific high level tasks (e.g., train level) required to achieve the goal of the response**	COMPLETE THE DEFINITION of the HFEs by specifying *(a)* accident sequence specific timing of cues, and time window for successful completion *(b)* accident sequence specific procedural guidance (e.g., AOPs, and EOPs) *(c)* the availability of cues and other indications for detection and evaluation errors **(d) the specific detailed tasks (e.g., at the level of individual components, such as pumps or valves) required to achieve the goal of the response**

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Issue 3: Reference to SRs in Other Sections

Need CNRM guidance on how to correct the problem:

1) Recommended(?):

   Change the NEI 07-12 process such that referenced SRs are also evaluated. Would require NEI Tables to be created whenever cross-references are made from one section to the other.

1) Divide each SR into 2-3 categories, and evaluate based on limited evaluation from the referenced SRs.

2) Expand existing Section 3 SRs to remove cross-references.

3) Other options?

ASME CNRM recommended providing comments to 07-12 to address the issue.

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Conclusions

Pilot applications look good, but resulting in some needed changes.

We hope to incorporate existing comments by June, 2008.

Additional changes are expected once some full FPRA Peer Reviews are complete.