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Subject: ASME Comments on Draft Regulatory Guide 1161 (Proposed Revision 1 of Regulatory Guide 1.200, dated February 2004), "An Approach For Determining The Technical Adequacy of Probabilistic Risk Assessment Results For Risk-Informed Activities," September 2006

Reference: Letter from Mr. Carl R. Grantom, Chair, ASME Committee on Nuclear Risk Management, Dr. William E. Burchill, Chair, ANS Risk Informed Standards Committee, Mr. Kenneth R. Balkey, Vice President, ASME Nuclear Codes and Standards, and Dr. N. Prasad Kadambi, Chair, ANS Nuclear Standards Board to Dr. Farouk Eltawila, Director, Division of Risk Assessment and Special Projects, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, "Joint PRA Standards Development by ASME and ANS," dated November 7, 2006.

Ladies and Gentlemen:

This letter provides ASME comments on proposed Draft Regulatory Guide DG-1161 (DG-1161) for consideration by the U.S. Nuclear Regulatory Commission (NRC). These comments, which have been prepared by the members of the ASME Committee on Nuclear Risk Management, address the various NRC clarifications and qualifications in DG-1161 Appendix A – NRC Regulatory Position on ASME PRA Standard. Where our comments indicate a recommended change to ASME RA-S-2002, "Standard for Probabilistic Risk Assessment for Nuclear Power Plant Applications," with Addenda RA-Sb-2005, the intent is that a proposed change will be developed for incorporation into the next revision of this Standard. This revision will occur either as part of the joint ASME / ANS Integrated PRA Standard as discussed in the referenced letter or as an Addendum C to the existing ASME RA-S-2002 Standard depending on the progress of the Integrated PRA Standard activities.

The ASME Committee on Nuclear Risk Management (CNRM) will address the clarifications and qualifications identified in Appendix A of DG-1161 and will take one of the following positions and actions for each comment:

1. General agreement with the clarification or qualification. A proposed revision to incorporate the clarification or qualification will be considered by CNRM for inclusion in the next revision/addendum of the standard.
2. General agreement with the intent of the clarification or qualification. CNRM will open an item to develop an appropriate change for the next revision/addendum to address the intent of the NRC clarification or qualification.
3. General disagreement with the proposed NRC clarification or qualification. CNRM will provide comments to support the disagreement.

The attached Annex 1 provides detailed ASME comments on DG-1161 Appendix A.

Please recognize that the proposed revisions discussed in this letter have not been processed through our consensus approval procedures and, therefore, may be modified before they are incorporated in the PRA Standard.

SUNSI Review Complete

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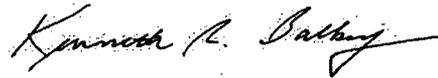
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Please contact Mr. Kevin Ennis, Director, ASME Nuclear Codes and Standards at 212-591-7075 or [ennisk@asme.org](mailto:ennisk@asme.org) if additional information or clarification regarding this information is required.

Sincerely,



C. Rick Grantom, Chair  
ASME Committee on Nuclear Risk Management



Kenneth R. Balkey, PE  
Vice President  
Nuclear Codes and Standards

Cc: Mr. Kevin Ennis, ASME Staff, Director, Nuclear Codes & Standards  
Mr. Richard Porco, Vice Chair, ASME Board on Nuclear Codes & Standards Operations  
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Dr. N. Prasad Kadambi, Chair, ANS Standards Board  
Mr. Don Spellman, Vice Chair, ANS Standards Board  
Dr. William Burchill, Chair, ANS Risk-Informed Standards Committee  
Ms. Mary Drouin, U.S. Nuclear Regulatory Commission  
Mr. Tony Pietrangelo, Nuclear Energy Institute

## Annex 1

### ASME Comments on DG-1161 Appendix A – NRC Regulatory Position on ASME PRA Standard

#### Section 1

NRC proposed Clarification: No change. Potential users of the Standard may wish to apply portions of it to other reactor types or advanced light water reactors until such time as more directly applicable PRA standards are available. Further, the proposed insertion of the word “current” becomes an issue as the Standard is updated.

#### Section 2.2

Proposed changes to definition of Core Damage: ASME is generally not in favor of the proposed change since it introduces Level 2 PRA considerations. However, it is recommended that this clarification be considered during a future discussion by the ASME CNRM.

Proposed change to definition of Extremely Rare Event: Proposed change is acceptable (and should be incorporated into the Standard) if the example is changed to be “/reactor-year” instead of “/yr”. Otherwise, it is inconsistent with the requirements.

Proposed change (qualification) to definition of Internal Event: No change. The existing wording reflects current common practice. The suggested change could be viewed as implying an inconsistency in the existing version of the Standard.

Proposed change to definition of PRA Upgrade: The suggested change would be acceptable with the deletion of the words “have the potential to”. ASME recommends revising the definition in the Standard to read: “The incorporation into a PRA model of a new methodology, or changes in scope or capability that impact the significant sequences. This could ...” Additional clarification per the planned Maintenance vs. Upgrade Guidance appendix to RA-S-2002 may also need to be included.

Proposed change to definition of Rare Event: Proposed change is acceptable (and should be incorporated into the Standard) if the example is changed to be “/reactor-year” instead of “/yr”. Otherwise, it is inconsistent with the requirements.

Proposed change to the reference in the definition of Reactor-year: The noted clarification is correct. This change should be incorporated into the Standard.

Proposed change to the reference in the definition of Reactor-operating-state-year: The noted clarification is correct. This change should be incorporated into the Standard.

Proposed change to the definition of Resource Expert: The noted clarification is acceptable, and the change should be made to the Standard.

Proposed new definition for Significant Contributor: ASME recommends that this definition be considered during a future discussion by ASME CNRM.

#### Section 3.5

Proposed clarification to 2nd paragraph in Section 3.5 is acceptable, and the change should be made to the Standard.

#### Section 3.6

The proposed clarifications should not be implemented in the Standard. Reference to “safety significance” is correct, as this is a reference to terminology used in ASME Code Cases that are the examples used in this section.

#### Section 5.4

The proposed change, to delete the clause referring to prioritization, is acceptable and should be made to the Standard.

#### Section 5.8

There is not complete agreement that the proposed change is needed. However, ASME will consider this further if Section 5 is revised.

#### Section 6.1

After substantial discussion, there is no clear consensus within ASME regarding acceptance of the proposed clarification. The ASME CNRM Applications Subcommittee has appointed a working group to consider possible changes to Section 6, and this clarification will be referred to that group for further consideration. The term Key Assumption was not included in the definitions or other requirements when this section was last considered by CNRM.

#### Section 6.3

After substantial discussion, there is disagreement within ASME regarding acceptance of the proposed clarification. The ASME CNRM Applications Subcommittee has appointed a working group to consider possible changes to Section 6, and this proposed clarification will be referred to that group for further consideration. However, this issue has been considered previously by CNRM, and there do not appear to be new bases provided for overriding the previous decision not to change the requirements.

#### Section 6.3.9.2

The proposed clarification is consistent with the definitions and this change should be made to the Standard.

#### Section 6.6.1

After substantial discussion, there was no clear consensus regarding acceptance of the proposed clarification. The ASME CNRM Applications Subcommittee has appointed a working group to consider possible changes to Section 6, and this clarification will be referred to that group for further consideration.

#### Supporting Requirement (SR) DA-C14:

The issue raised for this SR does not need a qualification. The issue could be considered as a clarification; however, sufficient requirements already exist to address plant-specific and generic data. Consider, for example, DA-C1 through DA-C4, and DA-D1, DA-D3 and DA-D4. A specific topic on identification and collection of plant-specific or industry data on repair time is sufficiently addressed by other requirements.

#### Supporting Requirement DA-D8:

A new requirement is not needed. Quantification is addressed in other requirements, including DA-D1, DA-D3, and DA-D4. An additional requirement would be redundant. Note that requirement LE-C2b needs to be changed to delete the reference to requirement DA-D8, as well as clarification for SY-A22 and DA-C14.

#### Supporting Requirement IF-C3b:

This qualification would create a situation for which data are difficult to obtain. Further, current use of compensatory actions would obviate the concern for any increase in risk contributions. At best, this qualification should be included only in Capability Category III.