

NRR-DRMAPEm Resource

From: Drouin, Mary
Sent: Friday, August 16, 2019 3:01 PM
To: Miller, Ed
Cc: Weerakkody, Sunil; Gilbertson, Anders; Gonzalez, Felix
Subject: Aug 21 public mtg 8-16-09.pptx
Attachments: Aug 21 public mtg 8-16-09.pptx

Ed,

Attached are my slides for the Aug 21 public meeting. Sunil and I have discussed the slide and he is good with them.

Tks, mary

Hearing Identifier: NRR_DRMA
Email Number: 180

Mail Envelope Properties (BN7PR09MB27218A04952DAE6D9806A260F7AF0)

Subject: Aug 21 public mtg 8-16-09.pptx
Sent Date: 8/16/2019 3:01:13 PM
Received Date: 8/16/2019 3:01:15 PM
From: Drouin, Mary

Created By: Mary.Drouin@nrc.gov

Recipients:

"Weerakkody, Sunil" <Sunil.Weerakkody@nrc.gov>
Tracking Status: None
"Gilbertson, Anders" <Anders.Gilbertson@nrc.gov>
Tracking Status: None
"Gonzalez, Felix" <Felix.Gonzalez@nrc.gov>
Tracking Status: None
"Miller, Ed" <Ed.Miller@nrc.gov>
Tracking Status: None

Post Office: BN7PR09MB2721.namprd09.prod.outlook.com

Files	Size	Date & Time
MESSAGE	149	8/16/2019 3:01:15 PM
Aug 21 public mtg 8-16-09.pptx	285749	

Options

Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

“Staff Activities on Regulatory Framework in Support of Next Revision to RG 1.200”

Mary Drouin
Office of Nuclear Regulatory Research
mry.drouin@nrc.gov (301) 415-2091
August 21, 2019

OUTLINE

- Proposed expedited issuance of Revision 3 to RG 1.200
- Status of NRC review of NEI 17-07
- Staff comments to ASME/ANS JCNRM on new edition to the standard
- Path forward

PROPOSED CHANGES TO RG 1.200

- Purpose of the changes is to provide further clarity and to make the process more efficient
- Changes primarily involve
 - Terminology
 - PRA upgrades and associated peer review
 - Newly developed methods and associated peer review
- Specific changes:
 - Revising C.2 – Consensus PRA Standards and Industry PRA Programs
 - Updating C.3 – Demonstrating the technical adequacy of a PRA used to support a regulatory application
 - Updating C.4 – Documentation to support a regulatory submittal
 - Adding C.5 – Glossary

C.2 Consensus PRA Standards and Industry PRA Programs

2.2 Industry Peer Review Program

- Divided into 3 subsections:
 - 2.2.1: Peer Review of Base PRA Model
 - 2.2.2: Peer Review of PRA Upgrade or of a Newly Developed Method
 - 2.2.2.1: Peer Review of PRA Upgrade
 - 2.2.2.2: Peer Review of a Newly Developed Method
 - 2.2.3: Facts and Observations Independent Assessment

2.2.1: Peer Review of Base PRA Model

- No additional clarifications proposed at this time

2.2.2.1: Peer Review of PRA Upgrade

This peer review is a focused peer review in that it only involves reviewing the changes to the PRA model as a result of the upgrades to the PRA model. Section C.5 provides a definition for PRA upgrade. A PRA upgrade can include:

- A basic change to the PRA model
- A new method not considered a state-of-practice
- A revision to a state-of-practice PRA method
- Application of a state-of-practice PRA method in a different context
- Application of a state-of-practice PRA method not used in the PRA model-of-record

2.2.2.2: Peer Review of a Newly Developed Method (1/2)

The peer review for a newly developed PRA method utilizes the same guidance as described in Section 2.2.1 for the peer review of a base PRA in determining whether it is appropriately implemented. However, with regard to determining the robustness of the method, there are additional considerations that need to be addressed.

- a peer reviewer is not assigned a newly developed PRA method to review if the reviewer was an author or co-author of the method under consideration, or their current immediate supervisor was an author or co-author of the newly developed method under consideration.
- if the peer reviewer is reviewing a newly developed PRA method, the reviewer needs to be knowledgeable of the technical area addressed by the newly developed PRA method. Understanding and competence of the newly developed PRA method needs to be demonstrated by the range of the individuals' experience in that technical area; that is the years and number of different activities performed in the technical area, as well as the different levels of complexity of the technical area.

2.2.2.2: Peer Review of a Newly Developed Method (2/2)

When reviewing a newly developed PRA method, there are certain conditions that need to be met in evaluating the robustness of the method:

	Staff Conditions
	<ul style="list-style-type: none">• The purpose and scope of the newly developed method are clearly demonstrated.
	<ul style="list-style-type: none">• The newly developed method is based on sound engineering and science relevant to its purpose and scope.
	<ul style="list-style-type: none">• The data (note that data can be numeric or non-numeric in nature) are relevant to the newly developed method, are technically sound, and properly analyzed and applied.
	<ul style="list-style-type: none">• Uncertainties in the newly developed method are characterized and their potential impact on the newly developed method understood.
	<ul style="list-style-type: none">• The results of the newly developed method are reviewed for robustness and are understandable and reasonable given the assumptions and data, and given the purpose and scope of the newly developed method.
	<ul style="list-style-type: none">• The documentation of the newly developed method shall provide traceability of the work and facilitate incorporation of the newly developed method in a PRA model.

2.2.3: Facts and Observations Independent Assessment

- No changes from that document in NRC letter (ML17079A427)

C.3 – Demonstrating the technical adequacy of a PRA used to support a regulatory application

- No additional clarifications provided at this time

C.4 Documentation to support a regulatory submittal

- No additional clarifications provided at this time

C.5 Glossary (1/2)

- Purpose of Glossary is to consolidate definitions of terms in one place in the RG
- Terms from text moved to glossary and clarifications added to some of the terms
- New terms with definitions added to the glossary

C.5 Glossary (2/2)

- PRA Acceptability
- As-built, as-operated
- As-designed, as-to-be-built, as-to-be-operated
- Assumption
- Key assumption
- Base PRA
- Consensus
- Conservative
- Current good practice (or state-of-practice)
- Key source of uncertainty
- Level of detail
- Newly Developed PRA method
- PRA maintenance
- PRA method
- PRA model of record
- PRA upgrade
- Realism
- Risk significance
- Significant accident sequence
- Significant basic event/contributor

NRC Review of NEI 17-07

- Staff review complete
 - Provided comments to NEI
- Not all comments adequately addressed

NRC Comments to ASME/ANS on New Edition to the Standard

- Summary of major staff comments on Part 1
 - Screening criteria: should have consistent set of criteria that is used for all parts of the standard
 - Definitions:
 - New definitions needed: for example, PRA method, PRA model, newly developed method, model-of-record, state-of-practice, base PRA
 - Revise (clarify) other definitions: for example, risk significance
 - Addition clarification needed on peer reviewer qualifications
 - Clarification on difference between a focused-scope peer review and an Independent Assessment
 - Need criteria, in form of High Level Requirements and Supporting Requirements, for peer review of newly developed method
- Staff comments been submitted to ASME/ANS

Proposed Path Forward

- Initiate Revision 3 to RG 1.200 on an expedited schedule
 - Endorsement of new edition will be part of Revision 4 to RG 1.200
- Revision 3 will include:
 - Changes as discussed on previous slides
 - Endorsement of ASME/ANS 2009 addendum
 - Endorsement of NEI 17-07
- Will hold periodic public meetings
 - Public meeting during development of revision
 - Public meeting during public review and comment
 - Public meeting after public review and comment
- Expedited schedule

Proposed Expedited Schedule/Milestones

- Mid-September, 2019 – public meeting to share draft guide of Revision 3 to RG 1.200
- Late November, 2019 – publish for public review and comment
- Early January, 2020 – public meeting to discuss DG
- Late January/Early February, 2020 – public meeting to discuss staff resolution of public comments, if needed
- Late March/early April – publish final rev 3 to RG 1.200