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From: Miller, Ed
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Subject: Material for 1/16/2020 Public Meeting - Anders Presentation
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Attached is the subject presentation material for the Jan 16, 2020, public meeting.

Status Update: Regulatory Guide 1.200

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OVERVIEW

- Status of Regulatory Guide (RG) 1.200
- Proposed changes to RG 1.200 for Revision 3
- Planned Path forward

Status of RG 1.200 (1 of 2)

- Revision 3 being prepared for publication as a draft RG
- Has been in development for about 2 years; staff position has been informed by
 - multiple public meetings
 - observation of pilots for new peer review guidance and consensus standard requirements
 - participation in Owner's Group workshops
- Public meetings have been conducted on RG 1.200, Revision 3 to:
 - share the staff's draft work product
 - solicit input from external stakeholders on proposed changes

Status of RG 1.200 (2 of 2)

- Anticipated light-water reactor PRA standard endorsements in RG 1.200, Revision 4:
 - Next edition of the ASME/ANS Level 1/LERF PRA standard
 - ASME/ANS Level 2 PRA standard

Proposed Changes to RG 1.200 (1 of 4)

- Changes are intended to provide additional clarity, improve process efficiency, and enhance safety
- Proposed changes include:
 - New staff endorsements
 - Enhancements/clarifications to guidance
 - Updates related to organization of RG content

Proposed Changes to RG 1.200 (2 of 4)

- NRC staff endorsements:
 - NEI 17-07, Revision 2¹
 - Appendix X – F&O independent assessment process
 - NDM peer review requirements
 - ASME/ANS RA-S Case 1 for seismic PRA²
 - PWROG-19027-NP, Revision 1³
 - definitions related to newly developed methods, PRA maintenance, and PRA upgrade (Section 2)
 - A process for determining whether a change to a PRA is PRA maintenance or a PRA upgrade (Section 3)
 - requirements for peer review of newly developed methods (Sections 4 and 5)
- Endorsements include consideration of comments from internal and external stakeholders (e.g., public, ACRS, NRC/OGC, etc.)

¹ See Agencywide Document Access and Management System (ADAMS) accession No. ML19241A615

² Available via <http://www.asme.org>

³ See ADAMS accession No. MLXXXXXXXXX

Proposed Changes to RG 1.200 (3 of 4)

- Enhancements/clarifications to guidance:
 - Key assumptions and sources of uncertainty
 - Risk-informed decisionmaking
 - Glossary of terms
 - Listing of hazards
 - Incorporates resolution of DPO-2016-001⁴
- Updates related to organization of content:
 - Reorganization of Sections A and B

⁴ See ADAMS accession No. ML17013A015

Proposed Changes to RG 1.200 (4 of 4)

- Sections A and B – Reorganized and includes discussion on PRA acceptability
- Section C.1 – Minor revisions, reorganized for clarity
- Section C.2 – Revised to expand staff position and include related new endorsements
- Section C.3 – Minor revisions related to key assumptions and sources of uncertainty
- Section C.4 – Revised to reflect changes in Section C.2
- Added glossary of terms
- New appendices for endorsements

Revisions to Sections A and B

- Reorganized for clarity
- Discussion on PRA acceptability added consistent with resolution of DPO-2016-001
- Provides current status of PRA standards efforts

Revisions to Section C.1

- Revised to provide clarity and consistent language
- Subsections on PRA technical elements arranged consistent with Parts in the ASME/ANS Level 1/LERF PRA standard
- Staff position on low-power and shutdown PRA moved into separate subsection in C.1

Revisions to Section C.2

- Revised for clarity
- Includes language related to ASME/ANS RA-S Case 1 for seismic PRA

Revisions to Section C.2.1

- Includes language regarding PRA state of practice and peer review of a newly developed method

Revisions to Section C.2.2

- Includes language related to the peer review of newly developed methods
- Divided into three main subsections:
 - 2.2.1 Peer Review of a Base PRA Model*
 - 2.2.2 Peer Review of a PRA Upgrade or Newly Developed Method*
 - 2.2.2.1 Peer Review of a PRA Upgrade*
 - 2.2.2.2 Peer Review of a Newly Developed Method*
 - 2.2.3 Facts and Observation Independent Assessment*

Revisions to Section C.2.2.1

- Includes added language on the peer review process, team qualifications, and documentation, consistent with NEI 17-07, Revision 2

Revisions to Section C.2.2.2

- Provides guidance on determining whether a change to a PRA is a PRA upgrade or PRA maintenance
- References Appendix C, which endorses process in PWROG-19027-NP, Revision 1

Revisions to Section C.2.2.2.1

- Defines PRA upgrade
- Refers to NEI 17-07, Revision 2, for related guidance on the peer review of a PRA upgrade
- Endorses requirements in PWROG-19027-NP, Revision 1, related to focused-scope peer review

Revisions to Section C.2.2.2.2

- Defines newly developed method and provides guidance on a peer review thereof
- Refers to NEI 17-07, Revision 2, for guidance on the peer review of a PRA upgrade
- Endorses requirements in PWROG-19027-NP, Revision 1, for the peer review of a newly developed method; includes documentation requirements and expectations on the outcome of such peer reviews

Revisions to Section C.2.2.3

- Endorses NEI 17-07, Revision 2, guidance on Facts and Observations (F&O) Independent Assessments.
- Guidance is consistent with the staff position documented in the NRC letter⁵ on the NEI Appendix X to NEI 00-02, NEI 05-04, and NEI 07-12
- Provides overall endorsement of NEI 17-07, Revision 2, as a means of satisfying the peer review requirements in ASME/ANS RA-Sa-2009

⁵ See ADAMS accession No. ML17079A427

Revisions to Section C.3

- Provides clarifications regarding key assumptions and sources of uncertainty

Revisions to Section C.4

- Revised to include documentation requirements related to a PRA upgrade, the use of newly developed method, and F&O independent assessments

New Glossary of Terms

- as-built, as-operated
- as-designed, as-to-be-built, as-to-be-operated
- assumption
- key assumption
- base PRA
- consensus method/model
- conservative
- current good practice (or state-of-practice)
- key assumption
- key source of uncertainty
- level of detail
- model*
- newly developed method*
- PRA
- PRA acceptability
- PRA maintenance*
- PRA method
- PRA upgrade*
- realism
- risk significance
- significant accident sequence
- significant basic event/contributor

* These terms and their definitions have been adopted from PWROG-19027-NP, Revision 1

New Appendices (1 of 2)

- Appendix A: Endorsement of ASME/ANS RA-Sa-2009, unchanged from RG 1.200, Revision 2
- Appendix B: Endorsement of ASME/ANS RA-S Case 1, *Case for ASME/ANS RA-Sb-2013 Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment of Nuclear Power Plant Applications*

New Appendices (2 of 2)

- Appendix C: Guidance for Classifying Changes to a PRA as PRA Maintenance or a PRA Upgrade
- Appendix D: Other Hazards

Planned Path Forward

- January 2020 – Public meeting to share draft
- February 2020 – ACRS Subcommittee Briefing
- NEI 17-07, Revision 2, and PWROG-19027-NP, Revision 1, to be revised to incorporate stakeholder comments