

Working Group #2: Treatment of Uncertainty in Decision Making

Risk Informed Steering Committee
Meeting

October 30, 2014

Working Group Progress

- Public meeting on October 16th, 2014 between Working Groups on Objective 2 [ML14300A386]
- Planning for focused public meeting on “tabletop” of existing guidance on treatment of uncertainty on November 20th, 2014 between working groups
- Reached alignment on scoping document

Public meeting on October 16th

- Focus on Objective 2 goals from action plan (i.e., evaluate current approaches)
 - Review content of guidance documents and other relevant literature from both government (e.g., NRC, DOE, NASA) and industry
 - Review relevant industry and NRC technical documents and identify potential application(s) for treatment of uncertainty
 - Identify current good practices in treatment of uncertainty in applications
 - Define needs for additional guidance, if any

Public meeting on October 16th

- Discussed how to achieve goals of Objective 2
- Included presentations on existing guidance
 - Reactor Oversight Process [ML14290A192]
 - Reactor licensing activities [ML14290A189]
 - Guidance from NUREG-1855 ““Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decision-Making,” [ML14290A197]
 - Guidance from EPRI reports [ML14290A195]

Public meeting on October 16th

- Discussed potential tabletop to meet the goals of Objective 2 and inform Objective 3
 - Aligned on a one-day Workshop that will include both Working Groups on November 20th, 2014 (at Church Street)
 - Identified that objectives/focus of the Workshop needs to be well defined (e.g., clarity is needed on the list of issues and guidance documents for review)
 - Agreed focus of the Workshop is not solely NUREG-1855 but general NRC and industry guidance on the subject
 - NEI Working Group recommends starting with example in EPRI 1026511 “Practical Guidance on the Use of Probabilistic Risk Assessment in Risk-Informed Applications with a Focus on the Treatment of Uncertainty”, but consider additional examples
 - Still need to answer if other organizations addressed gaps on this topic to obtain insights for recommendations moving forward

NRC WG feedback on Workshop 1

- Objective: Identify potential strengths and weaknesses in existing NRC and EPRI guidance on the treatment of uncertainty when addressing key issues (areas of concern) identified by NEI Working Group
- Suggest NEI host Workshop and NRC participate (need to decide Working Groups roles/involvement)
- Identify issues (whose descriptions need to be finalized prior to the workshop) to be addressed and sample applications (e.g., oversight, licensing) to provide actual implementation context

NRC WG feedback on Workshop 2

- Propose the scoping document address the goals of Objective 3 (i.e., potential outline)
- Characterize the different causes of uncertainty, and other related issues for risk-informed decision-making
 - Identify the reasons or causes why some uncertainties have not been addressed in past applications and which areas are being pursued and which are deferred
 - Identify guidance available to address specific types of uncertainties and current good practices
 - Identify areas for enhanced and/or new guidance
 - Propose a plan (including options for the specific issues) for the development of the enhanced and/or new guidance, as appropriate

Alignment on Scoping Document

- NEI Working Group works to develop recommendations with feedback from NRC Working Group and other members of the public
- Once the scoping document is complete, it would be forwarded to the NRC RISC via the NRC Working Group as recommendations that the NRC staff have endorsed (and would thereby be considered NRC staff recommendations)
- If any divergence arises, it would be expressed as clarifications to that effect and would be part of the memo from the NRC Working Group to the NRC RISC

NRC WG feedback on Product

- Propose the scoping document address the goals of Objective 3 (i.e., potential outline)
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Tentative Completion Date: 12/15/2014

Action Plan Overview & Schedule

1. Identify the specific causes for not being able to appropriately treat uncertainties in current risk-informed applications **[Almost Complete]**
2. Evaluate current approaches to addressing uncertainties in risk-informed decision-making and identify any gaps that need to be resolved ~~11/07/2014~~ **11/20/2014**
3. Propose enhancements to existing framework for addressing practical aspects of the treatment of uncertainty in risk-informed decision-making **[12/15/2014] January?**
4. Identify potential education mechanisms for both PRA practitioners and broader audiences, with respect to the treatment of uncertainty **[12/15/2014] January?**

Summary/Next Steps

- Progress is being made on Objective 2
- NRC Working Group recommends moving forward with a Workshop
- NEI Working Group will develop scoping document for review by NRC Working Group
- NRC Working Group will use scoping document insights to make recommendations to NRC RISC