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To: ["ANDERSON, Victoria"](#)
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Subject: Additional Comments for draft NEI RISC WG2 White Paper
Date: Friday, February 06, 2015 1:44:00 PM

Victoria,

As discussed at our public meeting, the NRC RISC WG2 provides the additional comments to the draft White Paper:

1) Under “What does PRA Uncertainty Analysis do and what does it not do”, 3rd bullet –

- *“Completeness uncertainties are difficult to quantify. This has been recognized in guidance (e.g., RG 1.174) as an uncertainty that is most often addressed by considering factors such as defense in depth and safety margins.”*

Comment: the guidance in RG 1.174 related to completeness uncertainty is stated in section 2.5.4. Nowhere in this portion of the RG is Defense-in-Depth or safety margins stated as a solution for completeness uncertainty. Rather, it points out that completeness uncertainty is basically a scope issue (e.g., the PRA did not include seismic or external flooding or high winds, etc.) and you cannot fix that issue by having more DiD or safety margins since you don't know how much more would cover the out of scope items.

Recommend revision as follows:

- Completeness uncertainties is a type of model uncertainty that reflects limitations in the scope of the base PRA (e.g., not including external hazards or not considering low power and shutdown modes of operations or the inability to address organizational performance/culture). This has been recognized in guidance (e.g., RG 1.174) as an uncertainty for which it is difficult to estimate because of these missing scope items. Sometimes these limitations can be mitigated by developing the models for these missing scope items or by reducing the scope of the application or by using bounding approaches to show the missing scope item does not have a significant impact on the application.

2) Under nature of PRA models, last bullet –

- *“Some assumptions are unstated and, while not significant for the base case assessment, could be relevant for specific applications, e.g., recovery actions.”*

Comment: do not consider recovery actions something that would/should be an unstated assumption (unless it means not crediting potential recovery actions). If that is the case, restate the parenthetical to “(e.g., additional credible recovery actions that are not credited in the base model).”

A better more specific example could be used. Suggest rewrite the bullet to make it clear that it is not assumption, but unstated/uncredited capability:

- *“Some capability is not credited in the base case and, while this may not be significant for the base case assessment, it could be relevant for specific*

applications (e.g., being able to open doors and use portable fans for loss of room cooling).”

3) Under Assessment of Current Treatment..., 3rd bullet last sentence –

- *“The processes for effectively aggregating and interpreting aggregated results are not well defined.”*

Comment: They were well defined in the 1980s when we did this. The concern with the potential for skewing the ultimate outcome is because of these broader hazard uncertainties. The mechanism for doing it is understood. Suggest rewrite:

- “While the processes for effectively aggregating parametric uncertainties and addressing model and completeness uncertainties is understood, the means for interpreting the aggregated results and making well-informed decisions based on the aggregated results is less clear.”

4) Under Assessment of Current Treatment ..., 4th bullet –

- *“Existing guidance is unclear concerning when and how to address the sources of uncertainty that are not captured in the mean value, but have been shown to potentially challenge the acceptance guidelines by using the other principles of risk-informed decision making (RIDM) (e.g., defense-in-depth).”*

Comment: similar to comment 1, it is incorrect to blend DiD in with the risk acceptance guidelines discussion. They are separate in this context. Suggest deleting the last portion of the sentence and simply state:

- “Existing guidance has been unclear concerning as to when and how to address the sources of uncertainty that are not captured in the mean value.”

Please note that this email will be added to public ADAMS.

Regards,

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