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Cc: [BASSO, Thomas](#)
Subject: [External_Sender] RG 1.183 feedback
Date: Monday, May 31, 2021 12:55:08 PM

Mike,

I wanted to provide you with a summary of industry feedback for consideration when preparing the preliminary draft of RG 1.183. This feedback is based on information discussed during the three public meetings where the NRC presented changes being considered for RG 1.183. We appreciate the Staff's efforts to make this guidance more useful by considering our feedback and comments as you develop the draft. Please recognize there was not enough time to discuss all our comments during the last two public meetings and that preparation for the most recent public meeting was challenged as a result of not receiving presentation materials until late in the afternoon the day prior. The following summary provides our major feedback:

- Industry is concerned with the staff decision to not provide formal responses to previously submitted comments on DG-1199. Industry wants the NRC to provide this information indicating which comments were incorporated in the upcoming draft and which comments were not, along with the reason justifying why they were not incorporated.
- Industry agrees with extending the BU to 68 GWD/MTU; however, we also expect to need BUs greater than 68GWD/MTU to support the longer-term designs. As discussed during the public meetings, having a path describing how to support burnups greater than 68 GWD/MTU is recommended to be included in Revision 1.
- In regards to the adequacy of the rod average power profile curves provided, fuel vendors indicated they were still evaluating the proposed curves but agreed that 68 MWD/MTU is appropriate for the near term but would probably not be suitable to support long-term designs. Also, there may be benefit to considering new curves with more flexibility but these options are still being explored. Additionally, fuel vendors also indicated they would prefer to discuss details concerning their review of the proposed curves independently with staff due to the proprietary nature of the information involved.
- A general concern is that by trying to encompass all the variations in fuel designs, the proposed revision may become too bounding and overly conservative. To address this, it is recommended that language be included indicating where information is considered bounding and acknowledging where alternative solutions may be applied if provided with supporting analysis.
- The revised guidance should enable consistency in reviews by identifying acceptable methods or major features to be considered without being too prescriptive but by providing enough information on what is necessary to support the review.
- An updated Table 4 RIA transient fission gas release including burnup-dependent correlations and separate PWR and BWR tables along with a representative PWR 17 x 17 table are desired.
- For addressing part length rods, modifying footnote 11 to allow an alternative for higher BUs for part length rods. Also, Revision 1 should incorporate guidance on how to determine release fractions when exceeding restrictions in footnote 11.
- During the public meetings, staff clarified that currently the streamlined approach considers past precedents in the development of a framework to provide quantitative credit for hold-up and retention of MSIV leakage within the PCS. The staff also provided that during the review of LARs regarding MSIV leakage, an integrated review team was formed to develop and use risk insights and that several risk insights were developed; however, the staff focused on the condenser and later the PCS holdup volumes because of the significant reduction in the calculated dose to account for uncertainties in other areas of the dose calculation. What were the other risk insights developed, but not used? Were these insights considered for application in other areas of this RG during the revision process? Please provide the details.
- FFRD Discussion:
During the second public meeting, a discussion on how FFRD would be handled in the draft

guide took place where the NRC declined to answer at that time. FFRD is an important issue to the industry and we want to understand the options that are being considered for inclusion in RG 1.183. It is understood that research is being engaged to provide release fractions using MELCOR up to 80 GWD/MTU. We would like the NRC to share as much information in regards to any research in this area as early as possible so we can investigate how it may impact our plant designs.

- Release Fractions Discussion:

It is desired to include separate release fractions for BWR's and PWR's. Ideally, the guidance would have an applicability statement to include all the fuel types currently being used in the US. If a limiting case is utilized, then information on if there is a specific design that is prominent so all are not held to overly conservative values, would be useful. For BWR's, 9x9 fuel is no longer in use and recommend updating this in the new guidance. Configurations that should be included in the guidance are specified below.

<u>BWR:</u>	<u>PWR:</u>
10x10	17x17
11x11	16x16
	15x15
	14x14

Also, we want to ensure that the option to calculate non-LOCA release fractions is included in the new guidance.

- For the revised FHA, Enclosure 3 - ML19248C683, provides the computational tool for the updated FHA model. In ADAMS this document is mis-printed and we would like to get a better-quality copy of this document to reference.
- Iodine Spiking Discussion:
A new topic industry would like the NRC to consider addressing during this revision process is relief on the "pre-accident" iodine spiking case and remove analyzing for accidents initiating from an LCO condition. Due to the very small probability of an accident occurring while the plant is operating in this LCO window (typically 48 hours), these scenarios should not be included in the Reg Guide. This is consistent with other design basis analyses where the initial conditions do not implicitly assume operation in a short-period LCO. For many plants, these LCO periods are risk-informed through the Risk-Informed Completions Times initiative (TSTF-505). Also, what information is needed to demonstrate that iodine spiking is overly conservative to get relief on the "concurrent" iodine spiking case? In particular, reducing the magnitude of the assumed iodine spiking for SLB and SGTR.
- Discussion of Lessons Learned from Licensing Reviews – GDC 19 Control room specifies access and occupancy. The industry has concerns regarding the regulatory basis for recent NRC requests of licensees to calculate the dose to control room personnel while transiting between the control room and the site boundary in association with the adoption of the AST methodology provided by 10 CFR 50.67. The industry position is that the request of licensees to calculate this dose is not required to comply with 10 CFR 50.67.
 - GDC-19 – Control Room applies to the design of the control room as part of the General Design Criteria from 10 CFR 50, Appendix A. In this respect, the control room should have the design features to allow someone to enter the control room (permit access) without affecting the radiation protection of the control room operators within. This is done with airlocks and positive ventilation techniques. The emergency planning requirements, which are part of the licensing basis, address the radiation protection from outside the control room envelope.
 - Section 4.2 of RG 1.183 clearly states that this dose is for persons located in the CR as evidenced by the opening statement: "The following guidance should be used in determining the TEDE for persons located in the control room".
- What is the impact on CR dose for each of the three deposition methods being considered in the upcoming revision when applied with and without the revised seismic analysis for the alternative drain pathway?
- There are concerns that the three deposition methods being proposed are not flexible enough for SMRs- for example some SMR designs take credit for holdup or aerosol deposition with the main steam lines.
- We would like to be provided with the details on the 2000-group method and the parameters

- used for convergence as compared to the 20-group method.
- We would like to be provided with the details pertaining to the technical assessment for the seismic analysis for alternative drain pathway.

Again, the staff's consideration of these comments for incorporation into the preliminary draft of RG 1.183 is appreciated. Also, we understand that the NRC is planning on reviewing a preliminary draft of RG 1.183 in mid/late September at the ACRS Subcommittee meeting and that this meeting would also provide an opportunity for external stakeholders to provide feedback. We trust that a requisite amount of time will be afforded prior to this meeting and during the meeting to be able to adequately review and then discuss industry comments on the preliminary draft RG 1.183.

If you have any questions on the topics provided above, please don't hesitate to contact me.

Hope you have a great holiday weekend!

Frankie

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