

From: Ross Moore <ross@oklo.com>
Sent: Wednesday, September 15, 2021 5:45 PM
To: Mazza, Jan; Kennedy, William
Cc: Caroline Cochran; Alex Renner; John Hanson; Lupold, Timothy; Drzewiecki, Timothy; Siwy, Alexandra
Subject: [External_Sender] Oklo takeaways from 9/1/21 public meeting

Hi Jan and Duke,

Please find below our takeaways from our last public meeting held on 9/1/21. The overall intent of this meeting was to obtain clarification on requests for supplement that were documented in the completeness determination forms. Since part of the purpose of the topical reports is to obtain a staff decision on acceptability of the methodologies as approaches that can be used to support reactor design and analysis, and the corresponding application, that ultimately comply with NRC regulatory requirements, it was first important to request clarification of specific comments and the regulatory basis that served as the foundation of the supplement requests. We will be using these understandings to develop responses to the information requested for the completeness determinations for each of the topical reports.

Maximum Credible Accident Methodology Topical Report

Comment IV - In this comment, the NRC remarked that the MCA TR should include additional information that specifies conditions and interfaces necessary for the implementation of the methodology, including such things as hazard identification, team composition, and documentation requirements. Oklo sought to understand the regulatory basis that specifies this level of detail, and to understand what is a true requirement compared to an expectation based on recent but separated guidance development.

Takeaways from discussion - Much of the discussion circled around the specificity in 10 CFR Part 50, Appendix B. Oklo raised the topic of its NRC-approved Quality Assurance Program Description, which outlines in greater detail important aspects referenced in the comment, such as design control, document control, records, and personnel training and qualifications. Oklo therefore intends to supplement the topical report with additional language on its NRC-approved Appendix B Quality Assurance Program, and that the general language regarding Appendix B are requirements for all applicants.

Performance-based Licensing Methodology Topical Report

Comment I.C - For this comment, the NRC questioned whether the Performance-based Licensing Methodology TR fully addresses the regulatory requirement under 10 CFR 50.34(f)(3) that the application provide sufficient information to demonstrate that the quality assurance list required by Criterion II, Appendix B, 10 CFR Part 50 includes all structures, systems, and components (SSCs) important to safety. Considering specific sections within the topical report address this comment, Oklo sought clarification on what this comment was intended to address.

Takeaways from discussion - Oklo pointed to the specific sections in the topical report used for both classification of functions and features, as well as translating that into quality assurance for structures, systems, and components based on importance to safety. NRC also agreed that identifying features and

functions is acceptable for compliance with the cited requirements in the comment, but made a note that additional language would strengthen this process. Oklo intends to include additional language in Section 4.6.2 of the topical report that bolsters how this is accomplished.

Comment I.D - The NRC included several comments under item I.D that alluded to inherent, but not explicit, requirements within the regulatory framework. In general, Oklo sought to better understand the regulatory basis associated with each of the below comments with respect to their inherent requirements, beyond guidance documentation, as there were no cited 10 CFR requirements included for comments I.D.1-4.

Comment I.D.1 - This comment was specifically with respect to the significance of safely shutting down the reactor under a broad spectrum of licensing basis events ranging from anticipated operational occurrences to design basis accidents, considering the topical reports use of an alternative definition of safety-related. Considering Oklo included a lengthy discussion in the topical report on the definition of safety-related, including its relation to the shutdown function, Oklo sought to understand the technical and regulatory basis associated with this comment.

Takeaways from discussion - There was a lengthy discussion regarding how reactor shutdown is an important function, to which both the staff and Oklo agreed. However, it remained unclear what the staff's current position is, where it is documented, and what the technical basis for that position is, with respect to necessitating that the shutdown function be specifically safety-related. Oklo intends to include this item as part of the 9/21/21 discussion in order to gain more clarity in this area.

Comment I.D.2 - The NRC remarked that the topical reports should include a discussion of how they provide adequate defense-in-depth and mitigation measures to protect against beyond-design-basis events. Oklo sought to understand the regulatory basis associated with this comment.

Takeaways from discussion - Oklo and the staff's discussion clarified that items I.D.1-4 were intended to be treated together and addressed as a whole, rather than independently. Specifically, for comment I.D.2, the NRC also clarified that the question was really two questions, how does the methodology provide for adequate defense-in-depth and how does it discuss mitigating measures to protect against beyond-design-basis events. The staff agreed that while there was no explicit regulatory requirement for certain items in I.D.1-4, including defense-in-depth, the NRC staff was using guidance and policy statements to steer their decision-making. Oklo and NRC agreed that defense-in-depth is established as a philosophy versus an explicit requirement. Oklo intends to evaluate items I.D.1-4 as a comprehensive comment and further discuss during the 9/21/21 public meeting.

Comment I.D.3 - The NRC included a comment for how the topical report will address uncertainty in selecting licensing basis events and design basis accidents. Oklo requested clarification on what specifically was intended by the "uncertainty in selecting" portion of the comment.

Takeaways from discussion - During the discussion, Oklo clarified that licensing basis event selection was not in the scope of the topical report itself, and for our use case, was included in the MCA methodology topical report. Oklo also noted that it is not proposing a new method for selecting events. It was generally agreed though, that any licensing basis event selection should include consideration of uncertainties. Oklo intends to evaluate including additional language to broadly explain how these uncertainties may be addressed or considered.

Comment I.D.4 - The NRC included a comment on ensuring that the overall risk to the public from the operations of the facility under normal conditions, transients, and during and after accidents is acceptably low, consistent with Commission policy. Given no specific policy was referenced in the comment, Oklo sought to understand the specific Commission policy being referenced here.

Takeaways from discussion - The NRC clarified that the Commission policy referenced in this comment is SECY-00-0077. Oklo intends to consider the content of this specific Commission policy and how it relates to the methodology presented in the topical report.

Comment II - The NRC commented that the PBLM TR does not address any exemptions from regulatory requirements, pursuant to 10 CFR 50.12, "Specific exemptions," that may be needed to implement the PBLM. Oklo sought clarification on any specific exemptions the NRC deemed necessary for implementation of the methodology.

Takeaways from discussion - Oklo remarked during the meeting that no specific exemptions were determined to be necessary for broad application of the methodology. The NRC also agreed that it did not identify specific exemptions that must be required to implement these methodologies, only that it could be the case based on an applicant's approach and technology. Oklo agreed that application may vary by a specific design's use case, and intends to supplement the report with language that discusses the need to request exemptions pursuant to 10 CFR 50.12, when a design requires it.

Oklo appreciated the discussion with NRC staff on these specific comments and looks forward to future discussions of the remaining comments and where proposals for supplement and resolution can be discussed.

Thanks,
Ross

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