Public Meeting on Oklo Topical Reports

September 16, 2021

MCA and Performance-based Licensing Topical Reports

Why are they important?

- Articulate the methodologies used by Oklo in developing the licensing basis for its reactor designs
- Offer an alternative licensing approach to the current approaches being considered for Part 53
- Represent a technology-inclusive, risk-informed performance-based licensing methodology, available for use by any advanced reactor developer, to enable broader deployment as directed by NEIMA

MCA and Performance-based Licensing Topical Reports

What do they do?

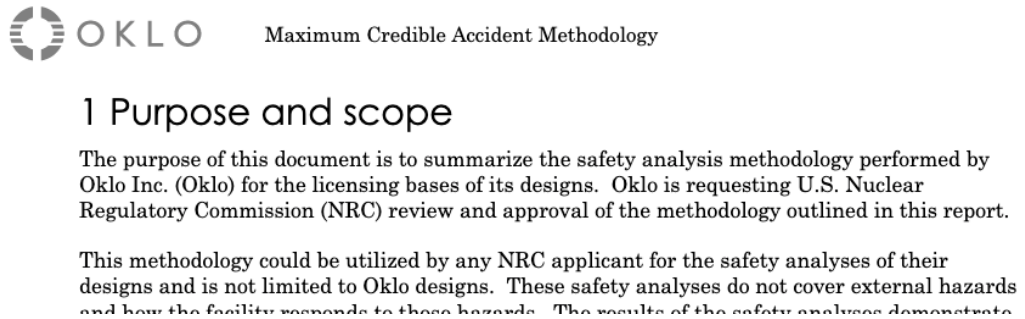
- Focus on the requirements for assuring adequate protection, rather than regulatory guidance developed for other technologies
- Utilize iterative processes to simplify the design, with preferential use of inherent features and passive systems over complex, active systems
- Clearly demonstrate safety significant functions and features of the design and how to apply the necessary controls to ensure their reliability

MCA and Performance-based Licensing Topical Reports

Current status?

- Oklo submitted both topical reports to the NRC on 7/2/2021
- NRC staff performed completeness review and identified supplemental information to support review of both topical reports
- Oklo/NRC discussion through public meetings on the identified supplemental information and proposed resolution of NRC staff comments

MCA and Performance-based Licensing Topical Reports



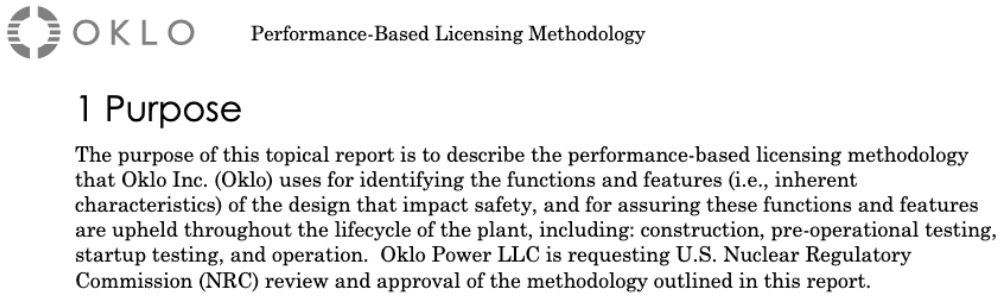
OKLO

Maximum Credible Accident Methodology

1 Purpose and scope

The purpose of this document is to summarize the safety analysis methodology performed by Oklo Inc. (Oklo) for the licensing bases of its designs. Oklo is requesting U.S. Nuclear Regulatory Commission (NRC) review and approval of the methodology outlined in this report.

This methodology could be utilized by any NRC applicant for the safety analyses of their designs and is not limited to Oklo designs. These safety analyses do not cover external hazards and how the facility responds to these hazards. The results of the safety analyses demonstrate



OKLO

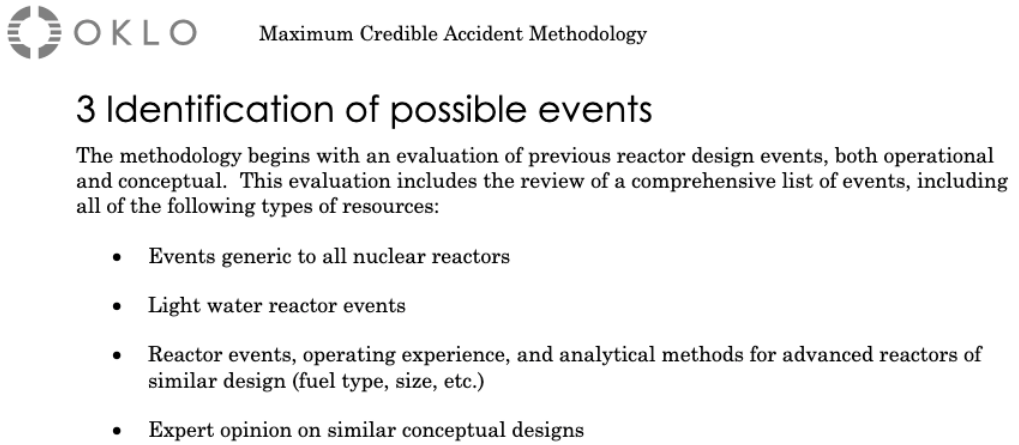
Performance-Based Licensing Methodology

1 Purpose

The purpose of this topical report is to describe the performance-based licensing methodology that Oklo Inc. (Oklo) uses for identifying the functions and features (i.e., inherent characteristics) of the design that impact safety, and for assuring these functions and features are upheld throughout the lifecycle of the plant, including: construction, pre-operational testing, startup testing, and operation. Oklo Power LLC is requesting U.S. Nuclear Regulatory Commission (NRC) review and approval of the methodology outlined in this report.

- Expand scope of the topical reports to clarify applicable requirements the methodology is addressing (MCA Comment I and PB Comment I)
  - What each report does.
  - What each report doesn't do (PDC development - Comment I.E)

Maximum Credible Accident Topical Report



OKLO Maximum Credible Accident Methodology

3 Identification of possible events

The methodology begins with an evaluation of previous reactor design events, both operational and conceptual. This evaluation includes the review of a comprehensive list of events, including all of the following types of resources:

- Events generic to all nuclear reactors
- Light water reactor events
- Reactor events, operating experience, and analytical methods for advanced reactors of similar design (fuel type, size, etc.)
- Expert opinion on similar conceptual designs

- Supplement with language to include examples of previously determined acceptable approaches based on approved guidance (MCA Comment II)

MCA and Performance-based Licensing Topical Reports

- Add new section “Interfaces” (MCA Comment I, III, PB Comment I)
  - Explains how the topical report interfaces with other licensing approaches (licensing basis event selection, performance-based licensing, etc)
  - Seeking additional clarification on MCA Comment III

III. The MCA TR does not Identify the techniques for providing margin to address uncertainties associated with the performance of new and novel features in identifying initiating events/hazards/event sequences. Providing margin to account for uncertainties was identified as a common element among all the approaches for identifying hazards, initiating events, and accident scenarios (see Note 1 and Note 2).

Questions?