

**From:** [Magruder, Stewart](#)  
**To:** [Darrell Gardner](#)  
**Cc:** [Candelario, Luisette](#); [Beasley, Benjamin](#); [Drew Peebles](#); [Jung, Ian](#); [Hayes, Michelle](#); [Wang, Weidong](#); [Mikula, Olivia](#)  
**Subject:** Discussion Items on Kairos Risk-Informed Performance-Based Licensing Basis Development Methodology Topical Report" (KP-TR-009)  
**Date:** Wednesday, January 08, 2020 8:51:00 AM  
**Attachments:** [Discussion Items Kairos RIPB Licensing Basis Developmeent Methodology TR.docx](#)

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Dear Mr. Gardner,

By letter dated August 5, 2019, Kairos Power LLC (Kairos) submitted for U.S. Nuclear Regulatory Commission (NRC) staff review KP-TR-009, "KP-FHR Risk-Informed Performance-Based Licensing Basis Development Methodology Topical Report" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML19217A420). In this topical report (TR), Kairos requested NRC staff approval of the risk-informed performance-based (RIPB) methodology as an appropriate method to develop licensing basis events (LBEs), classify structures, systems, and components (SSCs), and ensure defense in depth (DID) adequacy as part of safety analysis reports required to be submitted in license applications to satisfy the applicable regulations in 10 CFR 50 and 10 CFR 52.

By letter dated October 23, 2019 (ADAMS Accession No. ML19284D767), the NRC staff found that the material presented provides the technical information in sufficient detail to enable the staff to complete a detailed technical review. The NRC staff has completed its preliminary technical review and developed the attached set of clarifying questions and comments to improve the NRC staff's understanding of the information presented prior to the development of formal requests for additional information. The purpose of these questions and comments are to:

- Obtain clarification regarding material in the topical report
- Promptly identify areas where additional information may be needed
- Facilitate discussions and continue effective communication

The NRC staff requests that Kairos propose times to discuss the attached discussion questions and comments in a public meeting. In some instances, preliminary questions may support future requests for additional information (RAIs) or a regulatory audit. Kairos will be advised of the need for RAIs or a regulatory audit by separate correspondence.

Thank you,

**Stewart Magruder**

Senior Project Manager, Advanced Reactor Licensing Branch  
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