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U.S. Nuclear Regulatory Commission  
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**Subject: Radiant Submittal of “Gap Analysis for 10 CFR 55”**

This letter submits for review the results of a regulatory gap analysis performed by Radiant as part of its pre-application activities. This submittal, Enclosure 1, is in the form of a white paper titled, “10 CFR 55 Gap Analysis”.

The primary purpose of performing a gap analysis was to identify existing regulations that are not technically relevant to the Kaleidos reactor design. The enclosed gap analysis provides Radiant’s determination of the applicability of the regulations contained in 10 CFR 55 associated with the Kaleidos design, and includes a discussion on items identified as not applicable, items associated with potential exemption requests, or items requiring further evaluation.

Radiant requests that the U.S. Nuclear Regulatory Commission (NRC) staff provide feedback by letter on topics for which additional discussion may be beneficial and the staff’s observations on the conclusions presented in the white paper. The specific review schedule will be developed with Radiant’s NRC project manager.

This letter and enclosure make no new or revised regulatory commitments.

If you have any questions regarding this submittal, please contact Chanson Yang at [chanson@radiantnuclear.com](mailto:chanson@radiantnuclear.com) or (310) 741-2931.

Sincerely,

Chanson Yang  
Head of Regulatory Engineering

Cc: Stephen Philpotts, NRC Project Manager  
Kevin Roche, NRC Project Manager