



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 27, 2025

Peter Hastings, Vice President
Regulatory Affairs
and Quality
Kairos Power LLC
707 W Tower Ave, Suite A
Alameda, CA 94501

SUBJECT: U.S. NUCLEAR REGULATORY COMMISSION STAFF FEEDBACK
REGARDING KAIROS POWER LLC WHITE PAPER, "BASIC COMPONENT
DEFINITION FOR THE HERMES NON-POWER TEST REACTORS"

Dear Peter Hastings:

The purpose of this letter is to communicate the U.S. Nuclear Regulatory Commission (NRC) staff's feedback on the April 1, 2024, white paper submitted by Kairos Power, LLC (Kairos) titled, "Basic Component Definition for the Hermes Non-Power Test Reactors" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24092A389). The white paper provided Kairos's perspective on the definition of the term "basic component" as it applies to the Hermes facilities, considering Kairos's "vertically-integrated strategy of performing most safety-related design and manufacturing work internally." Kairos requested that the NRC staff review the white paper and provide written feedback to Kairos. The NRC staff provided draft feedback and observations to Kairos (ML24214A165) to support a discussion during a public meeting on August 30, 2024 (ML24250A120).

The NRC staff has completed its review, and the enclosure to this letter provides an assessment of the white paper. The staff's assessment discusses the safety importance of the reporting requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," and provides clarification on how these reporting requirements could be implemented for Kairos. The NRC staff acknowledges Kairos's vertically integrated structure and believes nothing in the staff's position inhibits Kairos's innovative approach. Enclosure 1 of the assessment further illustrates the NRC staff's position through a discussion of examples provided in the white paper. Enclosure 2 of the assessment contains information regarding the NRC staff's regulatory interpretation of the regulations and applicable guidance. The Office of the General Counsel has reviewed the assessment and both enclosures and has no legal objection.

If you have questions regarding this matter, please contact Cayetano Santos Jr. at (301)415-7270 or via email at Cayetano.Santos@nrc.gov.

Sincerely,

Joshua Borrromeo, Chief
Advanced Reactor Licensing Branch 1
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Project No.: 99902069

Enclosure:
As stated

cc: Kairos Power Hermes and
Kairos Power Hermes 2 via GovDelivery

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DATED: FEBRUARY 27, 2025

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ADAMS Accession No.:**PKG: ML24250A124****Letter: ML24250A129****Enclosure: ML24250A128****NRR-106**

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