

August 19, 2022

Docket No. 50-7513

US Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Subject: Kairos Power LLC  
Transmittal of Changes to Construction Permit Application, PSAR Chapters 2 and 3

References: 1. Letter, Kairos Power LLC to Document Control Desk, "Submittal of the Preliminary Safety Analysis Report for the Kairos Power Fluoride Salt-Cooled, High Temperature Non-Power Reactor (Hermes)," September 29, 2021 (ML21272A376))  
2. Audit Plan, Nuclear Regulatory Commission, "Kairos Power LLC – Hermes Construction Permit Preliminary Safety Analysis Report Site Characteristics (Chapter 2) Audit Plan," May 31, 2022 (ML22151A181)

In September 2021, Kairos Power submitted a Preliminary Safety Analysis Report (PSAR) (Reference 1) as part of the Construction Permit Application (CPA) for the Hermes non-power reactor. This letter transmits changes to the pages of the PSAR to address NRC feedback received on PSAR Chapter 2 in the Site Characteristics Audit (Reference 2). Consistency changes were also required to PSAR Chapter 3 as a result of these updates. Changes to the pages of the PSAR are provided in Enclosure 1. Kairos Power requests NRC review of these changes as part of the continued review of the Hermes CPA.

If you have any questions or need any additional information, please contact Martin Bryan at [bryan@kairospower.com](mailto:bryan@kairospower.com) or (865) 399-1136, or Darrell Gardner at [gardner@kairospower.com](mailto:gardner@kairospower.com) or (704) 769-1226.

I declare under penalty of perjury that the foregoing is true and correct.  
Executed on August 19, 2022

Sincerely,



Peter Hastings, PE  
Vice President, Regulatory Affairs and Quality

Enclosure: Changes to PSAR Chapters 2 and 3

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