

April 5, 2022

Docket No. 50-7513

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

Subject: Kairos Power LLC
Transmittal of Kairos Power PSAR Changes Relevant to Clarification of Coolant
Temperature Terminology

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)

Kairos Power submitted a Construction Permit Application (CPA) for the Hermes non-power reactor which included a Preliminary Safety Analysis Report (PSAR) (Reference 1). Subsequent to the initial submittal of this document, Kairos Power has made changes to Chapters 4 and 7 correcting an inconsistency in the terminology of core outlet temperature, reactor coolant outlet temperature, and reactor coolant inlet temperature. The change also clarified the description of STAR-CCM+ in Chapter 4 of the PSAR. These changes are considered administrative clarifications and do not result in changes to the design of the Hermes test reactor. Kairos Power requests NRC review of these changes as part of continued review of the Hermes CPA.

Changes to the pages of the PSAR affected by these corrections are provided in Enclosure 1. These changes are based on the submitted document and may not reflect other changes submitted separately.

If you have any questions or need any additional information, please contact Nicole Schlichting at schlichting@kairospower.com or at (980) 215-9252 or Darrell Gardner at gardner@kairospower.com or (704) 769-1226.

I declare under penalty of perjury that the foregoing is true and correct
Executed on April 5, 2022



Peter Hastings, PE
Vice President, Regulatory Affairs and Quality

Enclosures:

- 1) Changes to the PSAR

Kairos Power LLC
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xc (w/enclosure):

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