

August 18, 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 Preliminary Safety Analysis Report Table 4.2-5

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. Kairos Power, LLC, "Fuel Qualification Methodology for Fluoride Salt-Cooled High Temperature Reactor (KP-FHR), Revision 2," July 5, 2022 (ML22186A213)

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 reflect changes made in the Fuel Qualification Topical Report (Reference 2). 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 James Tomkins at [tomkins@kairospower.com](mailto:tomkins@kairospower.com) or (805)-215-6129, 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 18, 2022

Sincerely,



Peter Hastings, PE  
Vice President, Regulatory Affairs and Quality

Enclosure: Changes to PSAR Table 4.2-5

xc (w/enclosure):

William Kennedy, Acting Chief, NRR Advanced Reactor Licensing Branch  
Benjamin Beasley, Project Manager, NRR Advanced Reactor Licensing Branch  
Edward Helvenston, Project Manager, NRR Advanced Reactor Licensing Branch  
Samuel Cuadrado de Jesus, NRR Advanced Reactor Licensing Branch

**Kairos Power LLC**  
[www.kairospower.com](http://www.kairospower.com)