[7590-01-P]

NUCLEAR REGULATORY COMMISSION

[Docket No. 50-7513; NRC-2021-0193]

Kairos Power, LLC

AGENCY: Nuclear Regulatory Commission.

ACTION: Construction permit application; acceptance for docketing.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) staff accepts and dockets an application for a construction permit for the Hermes test reactor to be built in Oak Ridge, Tennessee.

DATES: This action becomes effective on November 29, 2021.

ADDRESSES: Please refer to Docket No. 50-7513 or Docket ID **NRC-2021-0193** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website**: Go to https://www.regulations.gov and search for Docket ID **NRC-2021-0193**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: Stacy.Schumann@nrc.gov. For technical questions, contact the individuals listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS)**: You may obtain publicly available documents online in the ADAMS Public Documents collection at https://www.nrc.gov/reading-rm/adams.html. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-209, 301-415-4737, or by email to PDR.Resource@nrc.gov. The ADAMS accession number for

each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in the SUPPLEMENTARY INFORMATION section.

- **NRC's PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. (ET), Monday through Friday, except Federal holidays

- **NRC's Public Website**: The construction permit application is available under the NRC's Hermes Construction Permit Application public website at https://www.nrc.gov/reactors/non-power/kairos-hermes.html

FOR FURTHER INFORMATION CONTACT: Benjamin Beasley, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-2062; email: Benjamin.Beasley@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Discussion

On September 29, 2021, Kairos Power LLC (Kairos) filed, pursuant to Part 50 of title 10 of the *Code of Federal Regulations* (10 CFR), "Domestic Licensing of Production and Utilization Facilities," the first part of an application (ADAMS Package Accession No. ML21272A375) for a construction permit for the Hermes test reactor (a "testing facility" as defined in 10 CFR 50.2), which would be located in Oak Ridge, Tennessee. Hermes would be a fluoride-salt cooled, high-temperature reactor that uses solid tri-structural isotropic fuel in pebble form. A notice of receipt and availability of this portion of the application was published in the *Federal Register* on October 29, 2021 (86 FR 60077).

The first part of the Kairos construction permit application consisted of the following information:

- The general information required by 10 CFR 50.33
- The Preliminary Safety Analysis Report required by 10 CFR 50.34(a)
- Exemption requests to support issuance of a construction permit
- A request to invoice the filing fee required by 10 CFR 50.30(e) and 10 CFR 170.21.

On October 31, 2021, Kairos filed the second part of its application (ADAMS Package Accession No. ML21306A131) for a construction permit, which consisted of the Environmental Report required by 10 CFR 50.30(f). Submission of the Environmental Report completed the application for a construction permit.

The NRC staff determined that Kairos submitted a two-part application in accordance with 10 CFR 2.101(a)(5) and 10 CFR Part 50, and that the application is acceptable for docketing under Docket No. 50-7513. The NRC staff provided Kairos notice of the acceptance and docketing determinations by letter dated November 29, 2021 (ADAMS Accession No. ML21319A354).

The NRC staff will perform a detailed technical review of the construction permit application and document its safety findings in a safety evaluation report. Also, in accordance with 10 CFR Part 51, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," the NRC staff will prepare an environmental impact statement for the proposed action.

Docketing of the application does not preclude the NRC from requesting additional information from the applicant as the review proceeds, nor does it predict whether the Commission will grant or deny the application. The construction permit application will be referred to the Advisory Committee on Reactor Safeguards for review

and report consistent with 10 CFR 50.58, “Hearings and report of the Advisory Committee on Reactor Safeguards.” If, after holding an evidentiary hearing, the Commission finds that the construction permit application meets the applicable standards of the Atomic Energy Act and the Commission’s regulations, and that any required notifications to other agencies and bodies have been made, the Commission will issue a construction permit, in the form and containing conditions and limitations that the Commission finds appropriate and necessary.

The Commission will announce, in a future *Federal Register* notice, the opportunity to petition for leave to intervene in a proceeding on the construction permit application.

Dated: November 24, 2021.

For the Nuclear Regulatory Commission.

/RA/

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Office of Nuclear Reactor Regulation.