

July 30, 2025

Project No. 99902069

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

Subject: Kairos Power LLC  
10 CFR 55 Exemption Requests for Non-Power Kairos Power Fluoride Salt-Cooled, High Temperature Reactors

References: 1. Letter, Kairos Power LLC to Document Control Desk, "Operator Training and Testing Program for the Non-Power Kairos Power Fluoride Salt-Cooled High-Temperature Reactors – Topical Report," July 11, 2025 (ML25192A232)

This letter submits four exemption requests from portions of 10 CFR 55 for non-power Kairos Power Fluoride Salt-Cooled, High temperature reactors. These exemption requests are provided for Nuclear Regulatory Commission (NRC) review and approval and are expected to be referenced by future non-power KP-FHR operating license applications.

Kairos Power discussed the exemptions with the NRC staff during pre-submittal engagement associated with the Non-Power Kairos Power Operator Training and Testing Topical Report, which was submitted for NRC review and approval on July 11, 2025 (Reference 1). The exemption requests incorporate feedback received during the pre-submittal meetings to enable an efficient acceptance and review of the requested exemptions. Kairos Power respectfully requests NRC acceptance review of the exemption requests be provided within 30 days of the receipt of this letter, and the review be completed within 6 months after acceptance.

Enclosure 1 provides the non-proprietary requested exemption to portions of 10 CFR 55.40(d). Enclosure 2 provides the non-proprietary requested exemption to medical requirements in portions of 10 CFR 55. Enclosure 3 provides the non-proprietary requested exemption to portions of 10 CFR 55.31(a)(5). Enclosure 4 provides the non-proprietary requested exemptions to portions of 10 CFR 55.55(a) and 10 CFR 55.59(a)(1).

If you have any questions or need any additional information, please contact Rachel Lynch at [lynch@kairospower.com](mailto:lynch@kairospower.com) or (704) 412-5920 or Drew Peebles at [peebles@kairospower.com](mailto:peebles@kairospower.com) or (704) 275-5388.

Sincerely,



Darrell Gardner  
Senior Director, Licensing

Enclosure:

- 1) Exemption Request to Portions of 10 CFR 55.40(d)
- 2) Exemption Request to 10 CFR 55 Medical Requirements
- 3) Exemption Request to Portions of 10 CFR 55.31(a)(5)
- 4) Exemption Requests to Portions of 10 CFR 55.55(a) and 10 CFR 55.59(a)(1)

xc (w/enclosure):

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