



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 2, 2020

Mr. Peter Hastings
Vice President, Regulatory Affairs
and Quality
Kairos Power LLC
707 W Tower Ave
Alameda, CA 94501

SUBJECT: KAIROS POWER LLC - ACCEPTANCE OF "KP-FHR FUEL PERFORMANCE
METHODOLOGY TOPICAL REPORT" (CAC NO. 000431)

Dear Mr. Hastings:

By letter dated December 18, 2019 (Agencywide Documents Access and Management System Accession No. ML19352G704), Kairos Power LLC (Kairos) submitted for U.S. Nuclear Regulatory Commission (NRC) staff review, "KP-FHR Fuel Performance Methodology Topical Report.". The NRC staff has performed an acceptance review of the topical report and found that it contains sufficient information to enable the staff to complete a detailed technical review. As part of the NRC staff's acceptance review, a phone call was held with Kairos on February 5, 2020, to clarify some issues raised in the report. During this phone call, Kairos committed to provide an updated version of the topical report by March 13, 2020. The NRC staff has based the review schedule and resource estimate provided in this letter on the quality and timeliness of the updated submittal. Notwithstanding the acceptance review, the NRC staff may require additional information to complete the detailed technical review. If needed, the NRC staff will request this information by separate correspondence by May 2020.

Based on the acceptance review, the NRC staff expects to issue a draft safety evaluation by October 2020. This date could change due to several factors, including the need for and timeliness of responses to requests for additional information; unanticipated changes to the scope of the review; and unsolicited supplements to the topical report. Additionally, the Advisory Committee for Reactor Safeguards (ACRS) will be notified of this topical report and may choose to discuss the report at an ACRS meeting which could impact the schedule for issuing the final safety evaluation to Kairos.

If the forecasted completion date changes, the NRC staff will notify you in writing of the new date and an explanation of the reason for the change. The NRC staff estimates that the review will require approximately 550 staff hours, including project management time.

Section 170.21 of Title 10 of the *Code of Federal Regulations* requires approvals and preapplication/licensing activities, including topical reports, to be subject to fees based on the full cost of the review. Kairos did not request a fee waiver for the cost of this review, therefore, NRC staff hours will be billed to Kairos accordingly.

The review schedule, estimated level of effort, and associated review costs were discussed and agreed upon during a phone call between Darrell Gardner, Director, License Application for Kairos and Stewart Magruder, Senior Project Manager, Advanced Reactor Licensing Branch, NRC on February 13, 2020.

If you have questions regarding this matter, please contact Stewart Magruder at (301) 348-5766 or Stewart.Magruder@NRC.gov.

Sincerely,

/RA/

Benjamin Beasley, Chief
Advanced Reactor Licensing Branch
Division of Advanced Reactors and
Non-Power Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Project No. 99902069

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METHODOLOGY TOPICAL REPORT" DATED: MARCH 2, 2020

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DATE	2/28/2020	3/2/2020	3/2/2020

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