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

November 12, 2021

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

SUBJECT: KAIROS POWER, LLC - SAFETY EVALUATION FOR KAIROS POWER, LLC TOPICAL REPORT KP-TR-007-NP, "QUALITY ASSURANCE PROGRAM FOR THE KAIROS POWER FLUORIDE SALT-COOLED HIGH TEMPERATURE REACTOR," REVISION 3 (EPID NO: L-2020-TOP-0030/CAC NO. 000431)

Dear Mr. Hastings:

By letter dated May 15, 2020 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML20136A414), Kairos Power, LLC (Kairos) submitted for U.S. Nuclear Regulatory Commission (NRC) staff review its topical report (TR) KP-TR-007-NP "Quality Assurance Program for the Kairos Power Fluoride Salt-Cooled High Temperature Reactor," Revision 0. This TR addresses power-reactor quality assurance requirements to support license applications for the Kairos Power Fluoride Salt-Cooled High Temperature Reactor. As part of its review the NRC staff sent three sets of preliminary clarification questions to Kairos on September 18, 2020, October 29, 2020, and January 15, 2021 (ADAMS Accession Nos. ML20273A292, ML20311A231, and ML21025A053, respectively). By letter dated March 8, 2021 (ADAMS Accession No. ML21071A081), Kairos provided Revision 1 of KP-TR-007-NP, which contained changes as a result of the NRC staff's preliminary clarification questions, which were discussed in public meetings held on October 7, 2020; November 19, 2020; and February 5, 2021 (ADAMS Accession Nos. ML21130A627, ML21073A003, and ML21292A273, respectively). In response to clarifications requested by the NRC staff during teleconferences held with Kairos on April 6, 2021 and April 21, 2021, Kairos submitted Revision 2 (ADAMS Accession No. ML21105A517) and Revision 3 (ADAMS Accession No. ML21117A046) of KP-TR-007-NP by letters dated April 15, 2021 and April 26, 2021, respectively. An additional clarification question was sent to Kairos on July 7, 2021 (ADAMS Accession No. ML21189A308), and discussed in a public meeting held on July 14, 2021 (ADAMS Accession No. ML21306A342).

The NRC staff's final safety evaluation (SE) for KP-TR-007-NP, "Quality Assurance Program for the Kairos Power Fluoride Salt-Cooled High Temperature Reactor," Revision 3, is enclosed. The NRC staff provided Kairos a draft of the SE for the purpose of identifying proprietary information on October 7, 2021 (ADAMS Accession No. ML21278A416). On October 11, 2021 (ADAMS Accession No. ML21306A123), Kairos confirmed that the SE does not include proprietary information.

The NRC staff requests that Kairos publish an accepted version of this TR within 3 months of receipt of this letter. The accepted version shall incorporate this letter and the enclosed SE

after the title page. The accepted version shall include an "-A" (designating accepted) following the TR identification symbol.

If you have any questions, please contact Samuel Cuadrado at samuel.cuadradodejesus@nrc.gov.

Sincerely,

Signed by Kennedy, William on 11/12/21

William Kennedy, Acting Chief
Advanced Reactor Licensing Branch
Division of Advanced Reactors and Non-Power Production and Utilization Facilities
Office of Nuclear Reactor Regulation

Project No. 99902069

Enclosure:
SE

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