



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

March 06, 2019

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

SUBJECT: ACCEPTANCE FOR REVIEW OF KAIROS POWER LLC, "PRINCIPAL DESIGN CRITERIA FOR THE KAIROS POWER FLUORIDE SALT-COOLED, HIGH TEMPERATURE REACTOR TOPICAL REPORT" (CAC NO. 000431)

Dear Mr. Hastings:

By letter dated December 21, 2018, Kairos Power LLC (Kairos) submitted for U.S. Nuclear Regulatory Commission (NRC) staff review, "Principal Design Criteria for the Kairos Power Fluoride Salt-Cooled, High Temperature Reactor Topical Report," (Agencywide Documents Access and Management System Accession No. ML18355B067). The NRC staff has performed an acceptance review of the "Principal Design Criteria for the Kairos Power Fluoride Salt-Cooled, High Temperature Reactor Topical Report," and found that the material presented provides the technical information in sufficient detail to enable the staff to complete a detailed technical review. The NRC staff expects to issue its request for additional information (RAI) by April 30, 2019, and issue its draft safety evaluation by September 30, 2019. A portion of the basis for completion of the evaluation on this schedule is Kairos' response to the RAI within 30 days of your receipt. The NRC staff estimates that the review will require approximately 600 staff hours, including project management time.

The Advisory Committee for Reactor Safeguards (ACRS) will be notified of the, "Principal Design Criteria for the Kairos Power Fluoride Salt-Cooled, High Temperature Reactor Topical Report," review and may choose to discuss the report at an ACRS meeting. This may result in a delay in issuing the final safety evaluation to Kairos.

The review schedule milestones and estimated review costs were discussed and agreed upon during a meeting between yourself and Stewart Magruder, Senior Project Manager, Advanced Reactor Policy Branch, NRC on February 25, 2019.

Section 170.21 of Title 10 of the *Code of Federal Regulations* requires that topical reports are subject to fees based on the full cost of the review. You did not request a fee waiver; therefore, NRC staff hours will be billed accordingly.

P. Hastings

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

Sincerely,

*/RA/*

John P. Segala, Chief  
Advanced Reactor and Policy Branch  
Division of Safety Systems, Risk Assessment and  
Advanced Reactors  
Office of New Reactors

Project No. 99902069

ACCEPTANCE FOR REVIEW OF KAIROS POWER LLC, "PRINCIPAL DESIGN CRITERIA FOR THE KAIROS POWER FLUORIDE SALT-COOLED, HIGH TEMPERATURE REACTOR TOPICAL REPORT" (CAC NO. 000431) – DATED March 06, 2019

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**NRO-002**

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|---------------|------------|------------|
| <b>OFFICE</b> | NRO/DSRA   | NRO/DSRA   |
| <b>NAME</b>   | SMagruder  | JSegala    |
| <b>DATE</b>   | 03/04/2019 | 03/06/2019 |

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