

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

July 18, 2023

MEMORANDUM TO: William Jessup, Chief

Advanced Reactor Licensing Branch 1

Division of Advanced Reactors and Non-Power

Production and Utilization Facilities
Office of Nuclear Reactor Regulation

FROM: Samuel Cuadrado, Project Manager /RA/

Advanced Reactor Licensing Branch 1

Division of Advanced Reactors and Non-Power

Production and Utilization Facilities
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF AUGUST 25 AND 30, 2022, PUBLIC MEETINGS

ON THE KAIROS HERMES PRELIMINARY SAFETY ANALYSIS

REPORT (EPID NO. L-2021-NEW-0011)

Meeting Information:

Applicant: Kairos Power, LLC (Kairos)

Docket/Project No.(s): 05007513

Public Meeting Notice Agencywide Documents Access and Management System (ADAMS)

Accession Nos.: ML22227A186 and ML22238A338

Meeting Attendees: See the enclosure for a list of meeting attendees.

Meeting Summary:

On August 25 and 30, 2022, the U.S. Nuclear Regulatory Commission (NRC) staff held partially closed meetings via webinar with Kairos. The U.S. Nuclear Regulatory Commission (NRC) staff conducted the meetings in accordance with NRC Management Directive 3.5, "Attendance at NRC Staff-Sponsored Meetings" (ADAMS Accession No. ML21180A271). The purpose of the meetings was to discuss the NRC's safety review of the Kairos Hermes test reactor construction permit application. Specifically, the staff provided clarification to Kairos for the following requests for additional information (RAIs):

- RAI 339, on inspection of vessel internals and the natural circulation flow path (ML22220A299)
- RAI 348, on shutdown rod reliability (ML22227A180)
- RAI 350, on air ingress into the primary heat transport system (ML22227A192)

CONTACT: Samuel Cuadrado, NRR/DANU/UAL1 301-415-2946

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During the meetings, Kairos discussed its draft responses to the three RAIs. The NRC staff provided clarification and was able to identify a few areas of the responses in need of additional detail. Kairos understood the clarifications provided and took action to incorporate the additional detail into its formal responses. Kairos also noted several changes that would be made to the PSAR. The NRC staff concluded that Kairos was on a satisfactory path to provide adequate responses to the RAIs in a timely manner. Kairos submitted its formal responses to RAIs 339 and 348 on August 31, 2022, (ML22243A247) and to RAI 350 on September 1, 2022, (ML22252A149), as originally expected (within 30 days of issuance of the RAIs).

No regulatory decisions were made as a result of this meeting.

Docket No. 05007513

Enclosure: List of Attendees

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KAIROS HERMES PRELIMINARY SAFETY ANALYSIS REPORT

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DATE: JULY 18, 2023

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ADAMS Accession Number: ML23181A107

NRC-001

OFFICE	NRR/DANU/UAL1/PM	NRR/DANU/UAL1/BC	NRR/DANU/UAL1/PM
NAME	SCuadrado	WJessup	SCuadrado
DATE	7/18/2023	7/18/2023	7/18/2023

OFFICIAL RECORD COPY

List of Attendees

Name	Organization	
Ben Beasley	U.S. Nuclear Regulatory Commission (NRC)	
Meg Audrain	NRC	
Alex Chereskin	NRC	
Stephen Philpott	NRC	
Ed Helvenston	NRC	
Jeff Schmidt	NRC	
Samuel Cuadrado	NRC	
Darrell Gardner	Kairos Power LLC	
Drew Peebles	Kairos Power LLC	
Jim Tomkins	Kairos Power LLC	
Chong Chen	Kairos Power LLC	
Gus Merwin	Kairos Power LLC	
Jordan Hagaman	Kairos Power LLC	
Ka-Yen	Kairos Power LLC	
Nicole Schlichting	Kairos Power LLC	
Michael Ellet	Kairos Power LLC	
Delaney Simmons	Kairos Power LLC	
Quan Zhou	Kairos Power LLC	
Tim Drzewiecki	Kairos Power LLC	
Anthonie Cilliers	Kairos Power LLC	
lan Gifford	TerraPower	
Michael Montecalvo	TerraPower	
Paul Ouellette	Engineering Planning and Management, Inc.	
Brandon Hartle	X-Energy	
Steve Vaughn	X-Energy	
Brandon Norris	X-Energy	