



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

November 6, 2024

MEMORANDUM TO: Josh Borromeo, Chief
Advanced Reactor Licensing Branch 1
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

FROM: Michael Orenak, Senior Project Manager
Advanced Reactor Licensing Branch 1
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE SEPTEMBER 27, 2024, PRE-APPLICATION
OBSERVATION MEETING WITH KAIROS ON THE TOPICAL
REPORT, "OPERATOR TRAINING AND TESTING PROGRAM
FOR THE KAIROS POWER FLUORIDE SALT-COOLED HIGH-
TEMPERATURE TEST REACTORS," AND THE ASSOCIATED
EXEMPTION

Meeting Information:

Applicant: Kairos Power LLC (Kairos)

Project No.: 99902069

Meeting Type: Observation Meeting

Public Meeting Notice: Agencywide Documents Access and Management System (ADAMS)
Accession No.: ML24270A087

Kairos Presentation Slides: ML24267A218

Contact: Michael Orenak, NRR/DANU
301-415-3229

Meeting Summary:

On September 27, 2024, an observation meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of Kairos Power, LLC (Kairos) to discuss the future topical report (TR), "Operator Training and Testing Program for the Kairos Power Fluoride Salt-Cooled High-Temperature Test Reactors," and the exemptions that will be necessary to implement the approach detailed in the TR.

Below is a summary of the comments and discussions:

- On slide 8, the NRC staff asked if the TR would contain a training program for the Kairos staff that will create and implement the exams. Kairos responded that the TR would contain a certification program. The NRC staff also asked if the TR would contain information about exam security, including independence of the training staff. Kairos stated that the TR does include information about the organization of the training program and their plans to ensure the security of exams.
- On slide 11, the NRC staff asked if Kairos plans on establishing a plant reference simulator or a Commission-approved simulator. Kairos responded that they plan on a Commission-approved simulator. The NRC staff then noted that there is a frequently asked questions webpage for new build power reactors containing simulator information that could be useful to Kairos. That website can be found at:
<https://www.nrc.gov/reactors/operator-licensing/licensing-process/faq-operator-licensing.html>
- On slide 13, the NRC staff noted that the NRC has yet to endorse ANS/ANSI 3.5-2018, "Nuclear Power Plant Simulators for Use in Operator Training and Examination," which Kairos plans on using to develop their TR. Regulatory Guide (RG) 1.149, "Nuclear Power Plant Simulation Facilities for Use in Operator Training, License Examinations, and Applicant Experience Requirements," Revision 4, endorses the 2009 edition of ANS/ANSI 3.5 (i.e., ANS/ANSI 3.5-2009) and discusses the associated exceptions and clarifications related to its usage. The NRC staff also noted that the use of ANS/ANSI 3.5 represents only one potential way to meet the regulations. Kairos should be aware that, if an unendorsed version of ANS/ANSI 3.5 is planned for use, the justification for the acceptability of its use as a means of meeting the associated regulations should be clear within the TR. Additionally, it will be important to clearly establish the associated regulatory basis, including any related commitments.
- Kairos asked if there is a timeline for the endorsement of ANS/ANSI 3.5-2018. The NRC staff responded that due to ongoing rulemakings, progress on the RG for endorsement was on hold because the rulemakings could affect the endorsement.

The NRC staff restarted the development of the RG, but no certain timeline was provided. There were no comments during the public comment period.

Enclosure:
List of Attendees

cc: Kairos Power Hermes via GovDelivery

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DATED: NOVEMBER 6, 2024

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ADAMS Accession Number: ML24282A673**NRR-109**

OFFICE	NRR/DANU/UAL1:PM	NRR/DANU/UAL1:LA	NRR/DANU/UAL1:BC	NRR/DANU/UAL1:PM
NAME	MOrenak	DGreene	JBorromeo	MOrenak
DATE	10/8/2024	10/8/2024	11/6/2024	11/6/2024

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List Of Attendees

Summary of Meeting with Kairos on the Topical Report, "Operator Training and Testing Program for the Kairos Power Fluoride Salt-Cooled High-Temperature Test Reactors," and the Associated Exemption

September 27, 2024

Name	Organization
Michael Orenak	U.S. Nuclear Regulatory Commission (NRC)
Cayetano Santos	NRC
Travis Tate	NRC
Amy Beasten	NRC
Michele DeSouza	NRC
Jesse Seymour	NRC
Drew Peebles	Kairos Power LLC (Kairos)
Rachel Lynch	Kairos
Joe-Nimique Cilliers	Kairos
Austin Clark	Kairos
Marty Bryan	Kairos
Anthonie Cillier	Kairos
Chris Poresky	Kairos
Shane Gallagher	Kairos
Anna Downing	Kairos
Hope Palmer	Kairos
Alan Kruizenga	Kairos
Jacquelyn Rodriguez	Kairos
Peter Hastings	Kairos
Jana Bergman	Curtiss-Wright
Jerry Newhouse	Reed College

Enclosure