



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

December 20, 2018

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

FROM: Stewart Magruder, Senior Project Manager /RA/
Advanced Reactor and Policy Branch
Division of Safety Systems, Risk Assessment and
Advanced Reactors
Office of New Reactors

SUBJECT: SUMMARY OF NOVEMBER 7, 2018, PUBLIC MEETING TO
DISCUSS KAIROS POWER TOPICAL REPORTS ON
PRINCIPAL DESIGN CRITERIA AND REGULATORY GAP
ANALYSIS

On November 7, 2018, the U.S. Nuclear Regulatory Commission (NRC) held a Category 1 public meeting with Kairos Power (KP) to discuss their proposed topical reports on Principal Design Criteria (PDC) and Regulatory Gap Analysis (RGA). The first portion of the meeting was open to the public and the second portion was closed to allow discussion of proprietary material. The presentation material for the public portion of the meeting is available in the Agencywide Documents Access and Management System Accession No. ML18309A299.

The meeting was opened by Mr. Darrell Gardner, Director, License Application for KP who stated that the meeting was one of a series of pre-application meetings that KP intends to hold with the NRC and that they are interested in the NRC staff's questions and concerns about the draft topical reports. He noted that KP will consider changes to the reports on the basis of the staff's input before they officially submit them.

Mr. Phil Sharpe of KP next provided an overview of the KP design concept. Mr. Gardner then briefly discussed KP's licensing approach. In response to a question from a member of the public, he noted that the timing of the submittals would be discussed during the closed portion of the meeting. He stated that KP was looking for feedback from the NRC staff on the PDC topical report and encouraged the staff to treat it as they would the preliminary safety analysis report for a Construction Permit Application. He noted that KP's regulatory philosophy is to resolve issues during pre-application discussions, if possible.

Mr. Ethan Chaleff of KP next presented an overview of the PDC topical report. He stated that the report was developed on the basis on RG 1.232, "Developing Principal Design Criteria for Non-Light Water Reactors." He noted that the KP design incorporates some aspects of Sodium Fast Reactors and some of Modular High Temperature Gas Reactors. In response to questions from the staff, he stated that the topical report would explain how KP determined the applicability of each PDC to their design. He also noted that portions of the topical report would be publicly available and that KP is implementing the industry-led licensing modernization project (LMP).

Mr. James Tomkins of KP next presented an overview of the RGA topical report. He noted that there are some regulations that do not literally apply to the KP design (e.g., 10 CFR 50.71(h) for PRA requirements) but the underlying issue does apply. In these cases, KP will consider the regulation to be applicable. The staff reminded KP that the Commission, in SRM-SECY-15-0002, has decided that the outcomes of reviews under 10 CFR Parts 50 and 52 should be equivalent. The staff also noted that they are working on guidance for an application that follows the LMP.

The remaining portion of the meeting was closed to the public.

Enclosure:

1. List of attendees

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TOPICAL REPORTS ON PRINCIPAL DESIGN CRITERIA AND REGULATORY GAP ANALYSIS
– DATED December 20, 2018

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NRO-001

OFFICE	NRO/DSRA	NRO/DSRA
NAME	SMagruder	JSegala
DATE	11/28/2018	12/20/2018

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List of Attendees

NAME	ORGANIZATION
Drew Peebles	Kairos Power
Phil Sharpe	Kairos Power
Ethan Chaleff	Kairos Power
Darrell Gardner	Kairos Power
James Tomkins	Kairos Power
Joe Williams	NRC
Andrew Yeshnik	NRC
John Segala	NRC
Marty Stutzke	NRC
Stu Magruder	NRC
Steve Lynch	NRC
Jan Mazza	NRC
Steve Bajorek	NRC
John Monninger	NRC
Nicholas McMurray	NRC
Michelle Hart	NRC
James Hammelman	NRC
Tuan Le	NRC
Imtiaz Madni	NRC
Lucieann Vechioli	NRC
Amy Cubbage	NRC
Boyce Travis	NRC
David Holcomb	ORNL
Mike Poore	ORNL
Kati Austgen	NEI
Alex Popova	OKLO
Jana Bergman	Curtiss Wright
Steven Dolley	Platts