



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

January 3, 2024

MEMORANDUM TO: William T. Jessup, Chief
Advanced Reactor Licensing Branch 1
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

FROM: Roel A. Brusselmans, 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 THE JUNE 15, 2023, PARTIALLY CLOSED
PUBLIC MEETING WITH TERRAPOWER, LLC, TO DISCUSS
INSTRUMENTATION AND CONTROL ARCHITECTURE AND
DESIGN BASIS (EPID NO. L-2021-LRM-0071)

Meeting Information:

Applicant: TerraPower, LLC (TerraPower)

Project No.: 99902100

Public Meeting Notice Agencywide Documents Access and Management System (ADAMS)
Accession No.: ML23142A300

Applicant Presentation Slides: ML23153A208

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

CONTACT: Roel A. Brusselmans, NRR/DANU
(301) 415-0829

Meeting Summary:

On June 15, 2023, the NRC staff held a partially closed public meeting with TerraPower to provide the U.S. Nuclear Regulatory Commission (NRC) staff with an overview of the Instrumentation and Control (I&C) architecture and design basis for the Natrium design. This meeting was held in anticipation of a forthcoming topical report from TerraPower regarding the same subject. Participants included representatives from TerraPower, the Department of Energy, General Electric Hitachi, Duke Energy, and members of the general public. The NRC staff conducted the meeting in accordance with NRC Management Directive 3.5, "Attendance at NRC Staff-Sponsored Meetings" (ML21180A271).

The NRC staff began the meeting with an introduction and explained that a portion of the meeting would be closed to the public to discuss proprietary information. During the public portion of the meeting, TerraPower provided an overview of the Natrium plant design including I&C systems, Natrium I&C regulatory framework, and a discussion on how defense-in-depth (defense lines) will be used to meet safety requirements. TerraPower explained how the safety related, non-safety related with special treatment, and non-safety related with no special treatment structures, systems, and components classification scheme would be used in this context. TerraPower discussed regulations and guidance related to I&C. Cyber security system requirements were also discussed. At the end of the presentation, the public had an opportunity to ask the NRC staff questions.

During the closed portion of the meeting, TerraPower provided additional details related to the I&C architecture and design basis for the Natrium design. TerraPower representatives and the NRC staff discussed the next steps for future interactions regarding the Natrium reactor design.

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

Enclosure: List of Meeting Attendees

cc: TerraPower Natrium via GovDelivery

SUBJECT: SUMMARY OF THE JUNE 15, 2023, PARTIALLY CLOSED PUBLIC MEETING WITH TERRAPOWER, LLC, TO DISCUSS INSTRUMENTATION AND CONTROL ARCHITECTURE AND DESIGN BASIS (EPID NO. L-2021-LRM-0071) DATED: JANUARY 3, 2024.

DISTRIBUTION:

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ADAMS Accession Number: [ML24009A194]

NRR-001

OFFICE	NRR/DANU/UAL1/PM	NRR/DANU/UAL1/PM	NRR/DANU/UAL1/LA	NRR/DANU/UAL1/BC
NAME	RBrusselmans	MSutton	DGreene	WJessup
DATE	10/20/2023	10/26/2023	11/2/2023	12/22/2023
OFFICE	NRR/DANU/UAL1/PM			
NAME	RBrusselmans			
DATE	1/3/2024			

OFFICIAL RECORD COPY

List of Meeting Attendees

SUMMARY OF THE JUNE 15, 2023, PARTIALLY CLOSED PUBLIC MEETING WITH TERRAPOWER, LLC, TO DISCUSS INSTRUMENTATION AND CONTROL ARCHITECTURE AND DESIGN BASIS (EPID NO. L-2021-LRM-0071)

June 15, 2023

Name	Organization
Mallecia Sutton	U.S. Nuclear Regulatory Commission (NRC)
Courtney Banks	NRC
Roel Brusselmans	NRC
Joseph Ashcraft	NRC
Steve Wyman	NRC
Zachary Gran	NRC
Candace de Messieres	NRC
Dan Warner	NRC
Ralph Costello	NRC
Reed Anzalone	NRC
Calvin Cheung	NRC
Ryan Sprengel	TerraPower, LLC (TerraPower)
Brian Johnson	TerraPower
Chris Hope	TerraPower
Dan Althouse	TerraPower
Jamie Getchius	TerraPower
Mark Burzynski	TerraPower
Mike Montecalvo	TerraPower
Mike Dunevant	TerraPower
Richard Beck	TerraPower
Ryan Miller	TerraPower
Jerry Mills	TerraPower
Bob Hirmanpour	TerraPower
Cyrus Afshar	TerraPower
Erin Wisler	TerraPower
Sean Kelley	General Electric (GE) Hitachi
Tim Enfinger	GE Hitachi
Allen Fisher	GE Hitachi
Jon Turner	GE Hitachi
Lee Grzeck	Duke Energy
Mark Natale	Department of Energy (DOE)
Timothy Stuhldreher	DOE