



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 JULY 19, 2023, PARTIALLY CLOSED
PUBLIC MEETING WITH TERRAPOWER, LLC TO DISCUSS
THE FUEL HANDLING SYSTEM INSTRUMENTATION AND
CONTROL FOR THE NATRIUM DESIGN (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.: ML23187A625

Applicant Presentation Slides: ML23188A184 (public)

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

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

Meeting Summary:

On July 19, 2023, the U.S. Nuclear Regulatory Commission (NRC) staff held a partially closed public meeting with TerraPower to provide the NRC staff with an overview of the fuel handling system instrumentation and control (I&C) architecture for the Natrium design. Participants included representatives from TerraPower, General Electric Hitachi, Duke Energy, the Department of Energy (DOE) 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 gave an overview of the Natrium design including a discussion of project goals, plant overview, and graphics explaining the design. TerraPower discussed the contents of its forthcoming topical report on the fuel handling system I&C for the Natrium design. Discussion topics included the fuel handling I&C design basis, I&C process overview, and fuel handling equipment subsystems. TerraPower also discussed fuel handling system failure effects as part of the fuel handling process overview.

During the closed portion of the meeting, TerraPower provided additional details related to the fuel handling system I&C for the Natrium design. TerraPower representatives and the NRC staff discussed the next steps for future interactions regarding the Natrium reactor design. Subsequent to the July 19, 2023, meeting, TerraPower informed the NRC staff that it would not be submitting a topical report addressing fuel handling system I&C. Rather, TerraPower determined that it would submit a technical report addressing this topic since the fuel handling system I&C architecture is not safety related.

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 JULY 19, 2023, PARTIALLY CLOSED PUBLIC MEETING WITH TERRAPOWER, LLC TO DISCUSS THE FUEL HANDLING SYSTEM INSTRUMENTATION AND CONTROL FOR THE NATRIUM DESIGN (EPID NO. L-2021-LRM-0071) DATED: JANUARY 3, 2024.

DISTRIBUTION:

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- JAshcraft, NRR

ADAMS Accession Number: [MLML24012A080]

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	10/23/2023	10/26/2023	11/1/2023	12/27/2023
OFFICE	NRR/DANU/UAL1/PM			
NAME	RBrusselmans			
DATE	1/3/2024			

OFFICIAL RECORD COPY

List of Meeting Attendees

SUMMARY OF THE JULY 19, 2023, PARTIALLY CLOSED PUBLIC MEETING WITH TERRAPOWER, LLC TO DISCUSS THE FUEL HANDLING SYSTEM INSTRUMENTATION AND CONTROL FOR THE NATRIUM DESIGN (EPID NO. L-2021-LRM-0071)

July 19, 2023

Name	Organization
Mallecia Sutton	U.S. Nuclear Regulatory Commission (NRC)
Roel Brusselmans	NRC
Calvin Cheung	NRC
Candace de Messieres	NRC
Joseph Ashcraft	NRC
Ryan Sprengel	TerraPower, LLC (TerraPower)
Ian Gifford	TerraPower
Nick Kellenberger	TerraPower
Dan Althouse	TerraPower
Erin Wisler	TerraPower
Jamie Getchius	TerraPower
Matt Mareka	TerraPower
Richard Beck	TerraPower
Chris Hope	TerraPower
Lee Meek	General Electric (GE) Hitachi
Trushant Shah	GE Hitachi
Jonathan Turner	GE Hitachi
Lee Grzeck	Duke Energy
Norman Kunkel	Duke Energy
Mark Natale	Department of Energy (DOE)