



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

July 11, 2023

MEMORANDUM TO: Joseph A. Proffitt, Acting Chief
Advanced Reactor Licensing Branch 1
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

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

Mallecia Sutton

Signed by Sutton, Mallecia
on 07/11/23

SUBJECT: SUMMARY OF THE OCTOBER 31, 2022, PARTIALLY CLOSED
PRE-APPLICATION MEETING WITH TERRAPOWER, LLC, TO
DISCUSS THE EMERGENCY PLANNING ZONE SIZING
METHODOLOGY (EPID NO. L-2021-LRM-0071)

Meeting Information:

Applicant: TerraPower, LLC (TerraPower)

Docket/Project No.(s): 99902100

Public Meeting Notice Agencywide Documents Access and Management System (ADAMS)
Accession No.: ML22304A043

Applicant Presentation Slides ADAMS Accession No.: ML22291A001, ML22291A002

Meeting Summary:

The U.S. Nuclear Regulatory Commission (NRC) staff conducted the meeting in accordance with NRC Management Directive 3.5, "Attendance at NRC Staff-Sponsored Meetings" (ADAMS Accession No. [ML21180A271](#)).

- On October 31, 2022, the U.S. Nuclear Regulatory Commission (NRC) staff held a partially closed public meeting with TerraPower, LLC (TerraPower) to provide the NRC staff with an overview of the Emergency Planning Zone Sizing Methodology (EPZ). Participants included representatives from TerraPower, the U.S. Department of Energy, General Electric Hitachi, Bechtel, Duke Energy, PacifiCorp, and members of the general public. The enclosure provides the list of meeting attendees.

CONTACT: Mallecia Sutton, NRR/DANU
(301) 415-0673

- The NRC staff began the public 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 representatives described how the proposed Sodium Plume Exposure Pathway (PEP) EPZ methodology follows the current guidance in draft Regulatory Guide 1.242, "Performance-Based Emergency Preparedness for Small Modular Reactors, Non-Light-Water Reactors, and Non-Power Production or Utilization Facilities," for establishing EPZ boundary size and performing supporting calculations. TerraPower representatives also provided the NRC staff with an overview of the Emergency Planning Strategy and Plume Exposure Pathway Methodology. At the end of the presentation, the public had an opportunity to ask questions of the NRC staff.
- During the closed portion of the meeting, TerraPower representatives presented, in more detail, the Emergency Planning Strategy and Plume Exposure Pathway Methodology and the EPZ Sizing Methodology. TerraPower representatives and the NRC staff discussed the next steps for future interactions regarding the Sodium Reactor design.

Enclosure:

List of Meeting Attendees

SUBJECT: SUMMARY OF THE OCTOBER 31, 2022, PARTIALLY CLOSED PRE-APPLICATION MEETING WITH TERRAPOWER, LLC TO DISCUSS THE EMERGENCY PLANNING ZONE SIZING METHODOLOGY (EPID NO. L-2021-LRM-0071) DATED: JULY 11, 2023

DISTRIBUTION:

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RidsNrrDanu Resource

MSutton, NRR

WJessup, NRR

CBanks, NRR

MHart, NRR

KMott, NSIR

TSmith, NSIR

JQuichocho, NSIR

KMiller, NRR

ERobinson, NSIR

ESchrader, NSIR

HPhan, NRR

RHoffman, NSIR

JSegala, NRR

ADAMS Accession Number: ML23030B894**NRC-001**

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|--------|------------------|------------------|------------------|---------------------|
| OFFICE | NRR/DANU/UAL1:PM | NRR/DANU/UAL1:PM | NRR/DANU/UAL2:LA | NRR/DANU/UAL1:BC(A) |
| NAME | CBanks | MSutton | CSmith | AProffitt |
| DATE | 1/31/2023 | 2/1/2023 | 6/20/2023 | 6/22/2023 |
| OFFICE | NRR/DANU/UAL1:PM | | | |
| NAME | MSutton | | | |
| DATE | 7/11/2023 | | | |

OFFICIAL RECORD COPY

List of Meeting Attendees

Partially Closed Pre-Application Meeting with TerraPower, LLC to Discuss the Emergency Planning Zone Sizing Methodology

October 31, 2022

| <u>Name</u> | <u>Organization</u> |
|-------------------|--|
| Mallecia Sutton | U.S. Nuclear Regulatory Commission (NRC) |
| Courtney Banks | NRC |
| Michelle Hart | NRC |
| Kenneth Mott | NRC |
| Todd Smith | NRC |
| Jesse Quichocho | NRC |
| Keith Miller | NRC |
| Edward Robinson | NRC |
| Eric Schrader | NRC |
| Hanh Phan | NRC |
| Raymond Hoffman | NRC |
| John Segala | NRC |
| Ryan Sprengel | TerraPower LLC, (TerraPower) |
| Tara Neider | TerraPower |
| George Wilson | TerraPower |
| Eric Williams | TerraPower |
| John Biersdorf | TerraPower |
| Leslie Holden | TerraPower |
| Mike Montecalvo | TerraPower |
| Stacy Gillin | TerraPower |
| Brian Johnson | TerraPower |
| Ian Gifford | TerraPower |
| Nick Kellenberger | TerraPower |
| Robert Petroski | TerraPower |
| Tim Enfinger | General Electric Hitachi |
| Shane Gardner | GEH |
| Lisa Schichlein | GEH |
| Steve Kline | Bechtel |
| Lee Grzeck | Duke |

Enclosure