



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

January 4, 2024

MEMORANDUM TO: Holly Cruz, Acting Branch Chief
Non-Power Production and Utilization Facility Licensing Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

FROM: Patrick Boyle, Project Manager
Non-Power Production and Utilization Facility Licensing Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF THE DECEMBER 14, 2023, PUBLIC MEETING
BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION
STAFF AND UNIVERSITY OF ILLINOIS AT URBANA-
CHAMPAIGN TO DISCUSS PROPOSED TOPICAL REPORT ON
FUEL QUALIFICATION METHODOLOGY
(EPID NO. L-2021-NFN-0002)

On December 14, 2023, an observation public meeting was held between the U.S. Nuclear Regulatory Commission (NRC) staff and representatives of the University of Illinois at Urbana-Champaign (UIUC) via webinar. The purpose of this meeting was to discuss the proposed Fuel Qualification Methodology topical report (TR) being developed to support research reactor plan to be built at UIUC campus. The meeting notice and agenda, dated December 14, 2023, are available in the Agencywide Documents Access and Management System (ADAMS) at Accession No. ML2332A304. The UIUC presentation used in the meeting is also available in ADAMS at ML23356A006. A list of meeting attendees is provided as an enclosure to this summary.

During the meeting, UIUC provided a presentation which included an overview of the nuclear fuel for the Ultra Safe Nuclear Corporation (USNC) Micro Modular Reactor (MMR) Fully Ceramic Micro-encapsulated (FCM): 1) Fuel Design, Fuel Manufacturing and Quality Control, Fuel Performance, and Fuel Performance Modeling. The meeting focused on the methodology of fuel qualification to include: 1) Testing and Characterization of Unirradiated Fuel and Materials, 2) Fuel Pellet Irradiation Tests in Material Test Reactors, 3) Post-irradiation Safety Testing, 4) Post-irradiation Examination, 5) Fuel Performance Modeling in Support of Fuel Qualification, 6) In-service Fuel Surveillance, and 7) Fuel Acceptance Criteria. UIUC stated that all other aspects related to the qualification of the MMR FCM fuel not defined within the scope of this TR will be provided in future regulatory submittals, as required prior to receipt of the Operating License.

H. Cruz

-2-

UIUC stated the need to obtain feedback from the NRC on the proposed technical approaches before finalizing plans to proceed.

CONTACT: Patrick Boyle, NRR/DANU/UNPL
(301) 415-3936

Project No.: 99902094

Enclosure:
List of Attendees

cc: GovDelivery Subscribers

SUBJECT: SUMMARY OF THE DECEMBER 14, 2023, PUBLIC MEETING BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION STAFF AND UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN TO DISCUSS PROPOSED TOPICAL REPORT ON FUEL QUALIFICATION METHODOLOGY (EPID NO. L-2021-NFN-0002) DATED: JANUARY 4, 2024

DISTRIBUTION:

- Public
- UARL R/F
- RidsNrrDanu Resource
- RidsNrrDanuUnpl Resource
- RidsOgcMailCenter
- RidsOpaMailCenter
- RidsOcaMailCenter
- NParker, NRR
- PBoyle, NRR
- PTorres, NRR
- EHelvenston, NRR
- HCruz, NRR
- DBeacon, NRR
- LKinsbury, NRR

ADAMS Accession No.: ML24004A140

NRC-001

OFFICE	NRR/DANU/UNPL/PM	NRR/DANU/UNPL/BC - Acting
NAME	PBoyle	HCruz
DATE	01/04/2024	01/04/2024

OFFICIAL RECORD COPY

List of Attendees

Public Meeting to Discuss the University of Illinois at Urbana-Champaign
Fuel Qualification Methodology Topical Report

Name	Organization
Patrick Boyle	U.S. Nuclear Regulatory Commission (NRC)
Paulette Torres	NRC
Michael Balazik	NRC
Beth Reed	NRC
Dan Beacon	NRC
Scott Burnell	NRC
Michael Snodderly	NRC
Lance Kingsbury	NRC
Les Foyto	University of Illinois at Urbana-Champaign (UIUC)
Caleb Brooks	UIUC
Timothy Grunloh	UIUC
Blaise Collins	Ultra Safe Nuclear Corporation (USNC)
Brian Ade	USNC
Kevin Pigg	USNC
Michael Hammer	USNC
Zackary Rad	USNC
Anne	Member of the Public
Ewa Muzikova	Member of the Public
Jay Patel	Member of the Public
Jeff Perry	Member of the Public
John	Member of the Public
Kurt Terrani	Member of the Public