



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

November 4, 2021

MEMORANDUM TO: Steven Lynch, Acting Chief
Advanced Reactor Policy Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

A handwritten signature in black ink, appearing to read "J. Sebrosky".

Signed by Sebrosky, Joseph
on 11/04/21

FROM: Joseph M. Sebrosky, Senior Project Manager
Advanced Reactor Policy Branch
Division of Advanced Reactors and Non-Power
Production and Utilization Facilities
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF OCTOBER 5, 2021, PUBLIC MEETING TO DISCUSS
TECHNOLOGY INCLUSIVE CONTENT OF APPLICATION PROJECT

On October 5, 2021, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting with stakeholders, to discuss the technology inclusive content of application project (TICAP). The meeting notice is available in the NRC's Agencywide Documents Access and Management System (ADAMS) at Accession No. ML21278A097, and the presentation slides are available at ADAMS Accession No. ML21278A029. The enclosure to this summary provides the attendees for the meeting as captured by Microsoft Teams.

The purpose of this meeting was to discuss with stakeholders issues related to the Nuclear Energy Institute (NEI) 21-07, Revision 0, "Technology Inclusive Guidance for Non-Light Water Reactors Safety Analysis Report Content for Applicants Using the NEI 18-04 Methodology" (ADAMS Accession No. ML21250A378). This meeting was a follow-on meeting to public TICAP meetings held on:

- May 11, 2021 (meeting summary available in ADAMS at Accession No. ML21132A295)
- May 19, 2021 (meeting summary available in ADAMS at Accession No. ML21154A290)
- May 26, 2021 (meeting summary available in ADAMS at Accession No. ML21158A223)
- June 23, 2021 (meeting summary available in ADAMS at Accession No. ML21181A335)
- August 17, 2021 (meeting summary available in ADAMS at Accession No. ML21245A442)

During the meeting, the NRC staff referred to the following two documents based on its review of NEI 21-07, Revision 0:

- A draft table containing proposed exceptions, clarifications and additions related to NEI 21-07, Revision 0 (ADAMS Accession No. ML21274A032)
- NRC detailed comments related to NEI 21-07, Revision 0 (ADAMS Accession No. ML21274A031)

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The NRC staff provided an overview of the 41 items identified in the draft table related to the NRC staff's review of NEI 21-07, Revision 0. The NRC staff provided an overview of the proposed 3 exceptions, 17 clarifications, 11 clarifications/additions, and 9 additions identified in the table. The three proposed exceptions are associated with the level of detail in the safety analysis report (SAR) for anticipated operational occurrences (AOOs), design basis events (DBEs), and beyond-design-basis events (BDBEs). The NRC staff stated that the SAR should include a description of the models, site characteristics, and supporting data associated with the calculation of the mechanistic source terms and radiological consequences (to the extent this information is not captured in other sections of the SAR) for AOOs, DBEs, and BDBEs. The NRC staff provided the basis for the proposed exceptions which included the importance of this information to the safety case and documenting this information in the SAR so future plant changes can be appropriately evaluated under Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.59, "Changes, Tests and Experiments," or the similar change process envisioned for 10 CFR Part 53, "Licensing and Regulation of Advanced Nuclear Reactors."

Industry provided a presentation that included questions regarding most of the items identified in the NRC staff's table. The NRC staff provided answers during the meeting to industry's questions.

The NRC staff noted that it was still developing a position regarding principal design criteria (PDCs). Guidance associated with developing proposed PDCs using a licensing modernization project (LMP)-based approach had been a topic of discussion during previous TICAP meetings. During this meeting and past meetings, the NRC staff stated some of its concerns including the underlying concern that industry's approach may not identify PDC associated with normal operations and areas associated with proposed special treatments (e.g., quality assurance, protection from external hazards, testability, inspectability).

Industry's position regarding PDCs remains the same as stated in previous meetings and is embedded in the NEI 21-07, Revision 0 guidance. That is, that the LMP-based safety case provides a more focused performance basis for a facility's safety based on the specifics of the unique design and that it will provide the same type of information included in the description of PDC in the introductory text of 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," Appendix A, "General Design Criteria for Nuclear Power Plants," in other elements of a SAR developed using the LMP methodology.

The meeting concluded with a discussion of the next steps. The NRC staff noted that it was targeting developing and issuing an update to the July version of the TICAP draft regulatory guide white paper (available at ADAMS Accession No. ML21190A014) to support an Advisory Committee on Reactor Safeguards (ACRS) Future Plant Designs Subcommittee meeting tentatively scheduled for December 15, 2021. Industry expressed interest in being able to provide a draft revision to NEI 21-07 before the NRC staff TICAP RG white paper was updated such that the set of proposed exceptions, clarifications, and additions were minimized before the NRC staff's document was shared with the ACRS.

Enclosure:
Attendance List

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TECHNOLOGY INCLUSIVE CONTENT OF APPLICATION PROJECT
DATED: NOVEMBER 4, 2021

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ADAMS Accession No. ML21245A442

NRC-001

OFFICE	NRR/DANU/UARP/PM	NRR/DANU/UARP/BC	NRR/DANU/UARP/PM
NAME	JSebrosky	SLynch	JSebrosky
DATE	10/29/2021	11/4/2021	11/4/2021

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**October 5, 2021, Public Meeting to Discuss
Technology Inclusive Content of Application Project**

Attendance List*

NAME	AFFILIATION	NAME	AFFILIATION
John Segala	NRC/NRR/DANU	Amir Afzali	Southern Company
Martin Stutzke	NRC/NRR/DANU	Brandon Chisholm	Southern Company
Steven Lynch	NRC/NRR/DANU/UARP	Mike Tschiltz	Nuclear Energy Institute (NEI)
William Reckley	NRC/NRR/DANU/UARP	Marc Nichol	NEI
Eric Oesterle	NRC/NRR/DANU/UARP	Steven Nesbit	LMNT Consulting
Juan Uribe	NRC/NRR/DANU/UARP	Ed Wallace	GNBC Associates
Joe Sebrosky	NRC/NRR/DANU/UARP	Cyril Draffin	US Nuclear Industry Council
Prosanta Chowdhury	NRC/NRR/DANU/UARP	Raymond Schiele	Excel
Jordan Hoellman	NRC/NRR/DANU/UARP	Eddie Grant	Excel
Stephen Philpott	NRC/NRR/DANU/UARP	Frank Akstulewicz	A to Z Reactor Consulting Services
Arlon Costa	NRC/NRR/DANU/UARP	George Wilson	TerraPower
Amy Cabbage	NRC/NRR/DANU/UARP	Bryan Eyers	TerraPower
Belkys Sosa	NRC/NRR/DANU/UARP	George Wadkins	GE Power
Eric Bowman	NRC/NRR/DANU/UARL	Dennis Henneke	GE Power
Hosung Ahn	NRC/NRR/DANU/UART	Jordan Hagaman	Kairos Power
Alexandra Siwy	NRC/NRR/DANU/UART	Drew Peebles	Kairos Power
Chris Van Wert	NRC/NRR/DANU/UART	Raymond Wang	X-energy
Timothy Lupold	NRC/NRR/DANU/UART	Travis Chapman	X-energy
Hanh Phan	NRC/NRR/DANU/UART	Jon Facemire	X-energy
Boyce Travis	NRC/NRR/DANU/UART	Steve Vaughn	X-energy
Ian Jung	NRC/NRR/DANU/UART	Eric Knox	Amentum
Margaret Audrain	NRC/NRR/DANU/UART	Alan Jelalian	Engineering Planning and Management Inc
Keith Compton	NRC/RES/DSA/AAB	Benjamin Jordan	Centrus Energy
Shakur Walker	NRC/COMM/DW	Michael Whitehurst	Centrus Energy
Tony Nakanishi	NRC/COMM/OCM	Chet Austin Sigmon	Duke Energy
Bob Weisman	NRC/OGC	Christopher Courtenay	Duke Energy
Carolyn Wolf	NRC/OCA	Amanda Spalding	Westinghouse
Tom King	Idaho National Lab (INL)	Randy Belles	Oak Ridge National Lab (ORNL)
Jim Kinsey	INL	George Flanagan	ORNL
Chris Chwasz	INL	Dave Grabaskas	Argonne National Lab
Tom Hicks	INL	Ross Moore	Oklo
Farshid Shahrokhi	Not Available (NA)	Jason Christensen	NA
Anne Leidich	NA	Richard Paese	NA
Greg Standinger	NA	Muhannad Shaqqo	NA
Brian Froese	NA	James Fornof	NA

NAME	AFFILIATION	NAME	AFFILIATION
Prasad Kadambi	NA	Lisa Peterson	NA
Sudhamay Basu	NA	Paul Loza	NA
Thomas Koshy	NA	Michael Mayfield	NA
Donald Behnke	NA	Zach Berkow	NA
Jana Bergman	NA	Curtis Smith	NA
Adam Tamilya	NA	Parthasarathy Chandran	NA
Ewa Muzikova	NA	Charlotte Geiger	NA
Alan Levin	NA	Ben Chen	NA
William Winslow	NA	Andrew Kadak	NA
Lauren Hughes	NA	Alec Hoppes	NA
Steven Pope	NA	Scott Ferrara	NA

* Attendance list based on Microsoft Teams Participant list. List does not include 5 individuals that connected via phone.