



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

March 25, 2019

MEMORANDUM TO: Samuel S. Lee, Chief
Licensing Branch 1
Division of Licensing, Siting, and Environmental Analysis
Office of New Reactors

FROM: Omid Tabatabai, Senior Project Manager /RA/
Licensing Branch 1
Division of Licensing, Siting, and Environmental Analysis
Office of New Reactors

SUBJECT: SUMMARY OF THE FEBRUARY 21, 2019, PUBLIC MEETING
WITH NUSCALE POWER, LLC, TO DISCUSS THE NUCLEAR
REGULATORY COMMISSION STAFF'S OPTIONS TO REVIEW
NUSCALE'S DESIGN CERTIFICATION APPLICATION, TIER 2,
CHAPTER 20, "MITIGATION OF BEYOND-DESIGN-BASIS
EVENTS"

On February 21, 2019, representatives of the U.S. Nuclear Regulatory Commission and NuScale Power, LLC (NuScale) held a public meeting to discuss NuScale's mitigation of beyond-design-basis events strategy and staff's options to review NuScale's Design Certification Application, Tier 2, Chapter 20, "Mitigation of Beyond-Design-Basis Events."

Enclosure 1 captures the summary of the topics discussed during the meeting. The agenda and list of meeting attendees are included in Enclosures 2 and 3, respectively. The meeting notice for this meeting is available in the Agencywide Documents Access and Management System under Accession No. ML19051A036.

Docket No.: 52-048

Enclosures:
1. Meeting Summary
2. Agenda
3. Attendees

cc w/encl.: DC NuScale Power, LLC Listserv

CONTACT: Omid Tabatabai, NRO/DLSE
301-415-6616

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 DATED: March 25, 2019

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ADAMS Accession No.: ML19084A136 *via email NRC-001

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U.S. NUCLEAR REGULATORY COMMISSION

SUMMARY OF THE FEBRUARY 21, 2019, PUBLIC MEETING WITH NUSCALE POWER, LLC, TO DISCUSS NRC STAFF'S OPTIONS TO REVIEW NUSCALE'S DESIGN CERTIFICATION APPLICATION, TIER 2, CHAPTER 20, "MITIGATION OF BEYOND-DESIGN-BASIS EVENTS"

The purpose of this public meeting was to continue discussion from the September 24, 2018 public meeting regarding the Nuclear Regulatory Commission (NRC) staff's review of NuScale Power, LLC (NuScale) design certification application (DCA), Tier 2, Chapter 20, "Mitigation of Beyond-Design-Basis Events (MBDBE)." During the September 24, 2018 public meeting, the NRC staff informed NuScale that based on the docketed information the NRC staff had three options to proceed with the review of NuScale's DCA, Chapter 20:

1. Review all of NuScale mitigating strategies during the combined-license (COL) reviews and provide no finality for the design certification.
2. Provide finality for the design certification up to the first 72 hours, and the COL applicant would be responsible for Phase 2 and Phase 3 of the MBDBE strategies.
3. NuScale can address the NRC staff's issue and include appropriate instrumentation beyond 72 hours for ensuring key safety functions are maintained and to facilitate decision making.

A summary of the September 24, 2018, meeting is available in Agencywide Documents Access and Management System (ADAMS) under Accession No. ML18290A860. At the conclusion of September 24, 2018 public meeting, NuScale requested additional time to think about the NRC staff's review options and provide its feedback to the NRC staff at a later time. On October 25, 2018, NuScale's Manager of Regulatory Affairs provided NuScale's feedback via an electronic mail (e-mail) to the NRC staff. NuScale's e-mail is available under ADAMS Accession No. ML18302A151. In its October 25, 2018 e-mail, NuScale informed the NRC staff that NuScale had provided enough information on the docket to allow the NRC staff to make a (favorable) regulatory finding on its MBDBE strategy at the design certification review stage and to provide finality even beyond 72 hours. In its October 25, 2018 meeting, NuScale also requested a follow-up public meeting with the staff to further describe its design features and technical information to support its position.

On February 21, 2019, the NRC staff and NuScale representatives met to continue their discussions regarding NRC staff's options to review NuScale's MBDBE strategy. The NRC staff informed NuScale that they had received and reviewed NuScale's October 25, 2018, e-mail that provided NuScale's perspectives on why the NRC staff did not need additional information from NuScale, or a combined license applicant, to make a regulatory finding on its MBDBE strategy beyond 72 hours.

The NRC staff also informed NuScale that the Commission had approved the final MBDBE rule, Title 10 of the *Code of Federal Regulations* (10 CFR) 50.155, on January 24, 2019 (ADAMS Accession No. ML19023A038), and that the issue of availability of Instrumentation to operators during a beyond-design-basis external event (BDBEE) continues to remain unresolved.

Specifically, NuScale believes that instrumentation to monitor the status of the core in a reactor module that is experiencing a BDBEE would not be needed once operators verify that the emergency core cooling system (ECCS) safety functions have been established. The NRC staff believes the regulations contained in 10 CFR 50.155 support the staff position that instrumentation capability must be available to operators throughout a BDBEE, even after operators verify that the ECCS and other safety systems have been established, given uncertainties in thermal hydraulic phenomena and boron distribution during long term cooling. The staff believes the availability of instrumentation ensures that operators can monitor the status of the modules and facilitate decision making and take actions as needed. The NRC staff also informed NuScale that they had begun drafting a SECY vote paper to seek the Commission's direction on how to proceed with the review of NuScale's MBDBE strategy.

In addition, the staff discussed inconsistencies between DCA, Tier 2, Section 20.1 and the supporting technical report, TR-0816-50797, "Mitigation Strategies for Extended Loss of AC Power Event," (ADAMS Accession No. ML17005A120). Specifically, the information contained in Section 20.1 indicates that instrumentation is used by the operators only until the safety function has been "established," which is in alignment with NuScale's position communicated in the October 25, 2018 e-mail. However, the information contained in TR-0816-50797 leads the NRC staff to believe that monitoring instrumentation will be used by the operators for a minimum of 72 hours and that it does not make a distinction between "establish" and "maintain" like the information in Section 20.1 does.

At the end of the meeting, NuScale informed the NRC staff that they will be submitting a formal letter to address staff's concerns and also to provide its review options for the staff to consider in its SECY paper. NuScale stated that they planned to submit its letter to NRC by March 29, 2019.

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MEETING AGENDA

Introduction	1:00 – 1:10 pm
Discussions related to DHRS/ECCS actuation logic	1:10 – 2:30 pm
Public Comments	2:30 – 2:35 pm

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LIST OF ATTENDEES

NuScale Power, LLC

Carrie Fosaaen
Nadja Joergensen
Mike Melton
Tom Bergman
Gary Becker
Liz English
Doug Bowman
Scott Weber
Chris Maxwell

U.S. Nuclear Regulatory Commission Staff

Omid Tabatabai
Ryan Nolan
Rebecca Karas
Boyce Travis
Tim Drzewiecki
Dinesh Taneja
Sam Lee
Don Palmrose
Raul Hernandez
Tania Martinez-Navedo
Peter Bamford
John Budzynski
Clint Ashley
Brian Smith
Robert Weisman
Ann Hove
Kevin Coyne
Sheila Ray
Matthew McConnell
Chang Li

Members of the Public

Sarah Fields